

# CALIFORNIA INTEROPERABILITY FIELD OPERATIONS GUIDE



CAL-IFOG

***“Communications Interoperability is the ability of public safety emergency responders to communicate with whom they need to, when they need to, as authorized.”***

***2007 CalSCIP***

## Letter of Introduction

It is with great enthusiasm that we present to you the first ever California Interoperability Field Operations Guide (Cal-IFOG). This guide is a collection of radio communications technical reference material for emergency responders, which includes information from the California Statewide Interoperability Executive Committee Channel Naming Report, the FIREScope Field Operations Guide, and the National Interoperability Field Operations Guide. This first iteration was developed with inputs from various state, local, and federal agencies and is intended to evolve through regular updates and expand as needed. Included within these pages are usage guidelines, statewide and national interoperability channels, and Incident Command System references. Mutual aid frequencies are open to all emergency responders, who are encouraged to program their radios as appropriate and authorized. As always, FCC rules and regulations with regards to licensing and operations should be followed. More information on this process is explained in Chapter 2.

Appendix D contains general information on the 58 Operational Areas in the State. This is where you can retrieve data on frequently used mutual aid channels and 24-hour emergency numbers.

To allow for timely updates and to minimize outdated content, the Cal-IFOG is bounded with a removable clasp allowing users to update their copy by swapping outdated sections with revisions provided by the California Interoperability Coordinators' Office.

We hope this guide becomes an indispensable tool in your day-to-day activities and it encourages more efficient and effective use of our limited mutual aid spectrum. Thank you to all that contributed to the development of the Cal-IFOG and those dedicated to ensuring that it stay relevant for years to come.



John Penido, Fire Chief  
City of San Marino, CalSIEC Chair



Michael Crews, Statewide Interoperability Coordinator  
California Emergency Management Agency

*Cal-IFOG*

*Jun 2010*

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## **Chapter 1 - About the Cal-IFOG**

The purpose of the California Interoperability Field Operations Guide (Cal-IFOG) is to be the emergency responders' everyday guide for interoperable radio communications.

The Cal-IFOG works towards the California Statewide Communication Interoperability Plan (CalSCIP) vision of achieving interoperability in the State of California by 2017 by providing emergency responders with information to achieve interoperability across the State. The Cal-IFOG:

- Increases efficiency in establishing interoperable communications during incidents.
- Creates a consistent knowledge base of interoperable communications frequencies and networks.
- Provides helpful tools for pre-planning and interoperable communications training and exercises.

All frequency information in the Cal-IFOG is presented in the format as it applies to programming mobile and portable radios.

### **Oversight Process**

The Cal-IFOG is a living document that will be continuously updated with an official updated version available once a year. The California Statewide Interoperability Executive Committee (CalSIEC) oversees the Cal-IFOG while the California Interoperability Coordinator's Office (CICO) within the California Emergency Management Agency (Cal EMA) facilitates the update process.

Please send all comments, corrections, updates and questions to the CICO at [interop@calema.ca.gov](mailto:interop@calema.ca.gov).

**Regional Structures****Mutual Aid Regions**

To facilitate mutual aid response, California is divided into Mutual Aid Regions—six Fire Mutual Aid Regions and seven Law Enforcement Mutual Aid Regions—for all-hazards mutual aid coordination. The mutual aid regional system is based on four organizational levels: local agencies, counties (Operational Areas), regions, and the State. The mutual aid regional system allows for geographically adjacent emergency response agencies within an Operational Area to assist each other in mutual aid response. Should the event require assistance from outside the Operational Area, the region will provide assistance to the impacted Area. If the combined resources of the region are insufficient to cope with the incident, the Regional Coordinator will contact the appropriate State Mutual Aid Coordinator at Cal EMA for assistance with resource requests.

**CalSIEC Planning Areas**

The CalSIEC Planning Areas are designed around radio propagation boundaries and structured for interoperability focused planning, management, policy development, and regional interoperability communications system build out. Though the CalSIEC Planning Area boundaries generally include one or more Mutual Aid Regions, incident response continues to be managed through the mutual aid regional system.

## California Regions



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## **Chapter 2 - Guidelines for Interoperable Radio Communications**

### **Eligibility for Participation in a Mutual Aid System**

As a general rule, mutual aid systems are open to all emergency responders of the discipline(s) for whom the system is designed.

### **Use of Interoperability Channels**

All radio transmissions on interoperability channels are for official use only. The radio frequencies may legally be used under the following circumstances:

- The user agency retains a Federal Communications Commission (FCC) license or a National Telecommunications and Information Administration (NTIA) authorization for these frequencies, or the user is covered by another authority's license.
- A "Letter License" is granted by Cal EMA and endorsed by the CalSIEC, allowing an agency to use any interoperability frequencies licensed to the State of California.

For more information on the Letter License process, please e-mail [interop@calema.ca.gov](mailto:interop@calema.ca.gov).

- The NTIA issues a "Special Temporary Authorization" for the use of Federal channels in a particular area/event.
- The user is assigned to an incident with those radio frequencies/channels/talkgroups listed on the Incident Radio Communications Plan (Incident Command System [ICS] Form 205).
- The use of the frequency is necessary for the IMMEDIATE protection of life or property. When necessary, radio users may use prudent measures beyond the specifics of their license.

Note: The Cal-IFOG does not grant authority to operate on radio frequencies. Such authority comes in the situations indicated above.

**Licensing of Interoperability Channels**

All radio transmitters, both base and mobile, require a current FCC license before being placed in operation.

Prior to installation or use of interoperability channels, the potential user must e-mail Cal EMA with a description of the planned use at [interop@calema.ca.gov](mailto:interop@calema.ca.gov). The existing mutual aid systems in California are covered in Chapter 3. Licensing methods vary from system to system and may require authorizations by several authorities.

**Plain Language**

All communications shall be in plain language. Radio codes, acronyms, and abbreviations are to be avoided as they may cause confusion between agencies.

- Plain words such as “help,” “assistance,” and “back-up” may have different operational meanings to different agencies.
- The words “emergency traffic” should be used in the context of a life-threatening situation.
- The word “help” should not be used alone unless in the context of a life-threatening situation.
- Requests for assistance or backup should clarify the reason for the request.
- All verbal requests for assistance or backup should specify the reason(s) for the request and be acknowledged by the receiving station.

See Appendix B for a glossary of common plain language words and phrases.

**Channel/Talkgroup Names**

Standardized channel/talkgroup names should be stated in widely used terms (e.g., “WHITE 2” or “NIFC TAC 2”). Channel/talkgroup numbers corresponding to how a specific radio is programmed should not be used unless the resource cannot display Alphabetic characters (e.g., “Channel 1” or “Channel A14”).

### **Identification Process**

The agency name or identifier shall precede the unit identifier.

- When calling another unit/ICS position, the standard is to identify who you are calling first, followed by your call sign (e.g., "Fremont Engine 51, Cal Fire Battalion 1614," "Division B, XAL Strike Team 2001C," or "4 Charlie Baker, Sacramento Battalion 2104"). This process is critical, especially when a unit is broadcasting an emergency.
- Units must use their agency-assigned unit designator during transmissions. These should not be shortened and should include the entire set of letters and/or numbers.
- Base stations should identify themselves by using their agency name along with any other usual identifier. Base stations must use the FCC call sign shown on their license at least once every 30 minutes or at the end of a contact.
- When neighboring agencies, operating on different radio systems, respond to mutual aid incidents, units should finish their transmission with the channel they are transmitting on. (e.g., "Fremont Engine 51, Division B on White 2," "Operations, Division A on Command.")

### **Priority Levels**

Many statewide mutual aid systems are limited to emergency operations, with the exception of tests and drills. When a higher priority use is required, all lower priority uses must cease in any area where interference could occur.

Priority levels for these systems are as follows:

1. Disaster and extreme emergency operations for mutual aid and interagency operations.
2. Emergency or urgent operations involving imminent safety of life or protection of property.
3. Special event control activities, generally of a preplanned nature and generally involving joint participation of two or more agencies.
- 3a. Drills, tests, and exercises.

4. Single agency secondary communications. The channels listed below may be used for day-to-day communications as a local agency secondary channel
  - CLEMARS 6 and 7 (VHF Low Band)
  - CLEMARS 1 and 2 (VHF High Band)
  - CLEMARS 4 and 5 (UHF Band)
  - CLEMARS 22 (UHF T-Band)

**Channel Monitor**

Personnel should monitor mutual aid channels prior to transmitting to minimize the possibility of interference with communications in progress. To do so, radio operators can place the radio in the "monitor" mode (front panel switch), or take the microphone off hook (for some radios this disables CTCSS).

**Encryption**

The use of any mutual aid channel for transmission of any encoded, encrypted, or scrambled message is prohibited.

**Out-of-Area/Itinerant Mobiles**

Base stations are encouraged to monitor mutual aid channels at all times. Typically, these channels are the only means for personnel traveling outside their normal jurisdiction to obtain assistance or to report traffic collisions, fires, or other hazards.

## **Chapter 3 - Statewide Mutual Aid Radio Plans and Systems**

### **SMARS**

Cal EMA owns and operates three interconnected mobile relay radio networks for mutual aid coordination and oversees a number of communications channels for field-level coordination purposes. The Statewide Mutual Aid Radio System (SMARS) is the overarching program encompassing the interconnected networks: the California Emergency Services Radio System (CESRS), California Law Enforcement Radio System (CLERS), and Cal EMA Fire and Rescue Mutual Aid Coordination Network (FIRE Net).

### **CALCORD**

**Eligibility:** All California local government public safety agencies.

The California On-Scene Emergency Coordination System (CALCORD) provides a common radio frequency to be used by State and local public safety and special emergency agencies during emergencies where interagency coordination is required.

The CALCORD channel should only be used in mobile and portable units at the scene of any emergency incident requiring coordinate action by more than one agency. These agencies must be eligible to operate in the Public Safety or Special Emergency Radio Services. Use of this system is limited to emergency operations, with the exception of tests and drills. Sustained operations must be coordinated with CalEMA Telecommunications Duty Officer via the Warning Center at 916-845-8911.

### **CESRS**

**Eligibility:** Cal EMA and county-level emergency services.

CESRS is the network Cal EMA uses for direction and control/mutual aid coordination. It connects Cal EMA Regions, field staff, and many Operational Area Emergency Operations Centers (EOCs) via two-way radios.

### **CLERS**

**Eligibility:** Law enforcement agencies.

CLERS is the law enforcement community's mutual aid coordination radio network. It supports dispatcher-to-dispatcher

communications at any level (City to Operational Area to Region to State) and is not intended to be used by field units.

### **CLEMARS**

**Eligibility:** All law enforcement agencies, including certain special districts, public educational institutions, federal law enforcement agencies, and other public entities.

The California Law Enforcement Mutual Aid Radio System (CLEMARS) is designed for necessary day-to-day operations, provided such use does not interfere with a higher priority need in the area. The National Law Enforcement Mutual Aid Radio System (NALEMARS) is one of the channels included within the CLEMARS pool of frequencies, allowing for communication with similarly equipped units from agencies in other parts of the United States.

Law Enforcement agencies must inform other area (line-of-sight) user agencies when they are involved in high priority usage of CLEMARS channels. Such notification should be via several of these four forms:

- A broadcast should be made on CLEMARS.
- A CLETS message to adjoining CLEMARS users. Agencies may wish to utilize the California Law Enforcement Telecommunications System [CLETS] "User Group Notification" feature.
- California Law Enforcement Radio System [CLERS] notification (via point-to-point radio system).
- Telephone calls to area frequent users.

CLEMARS 20 and 21: Due to special license restrictions, this channel is available only to Law Enforcement agencies located north of (and including) the counties of Monterey, Kings, Tulare, and Inyo.

CLEMARS 22: Due to special license restrictions, this simplex channel is available only to Law Enforcement agencies with base stations located within 50 miles of Los Angeles City Hall (mobiles and portables within 80 miles).

### **Cal EMA Fire and Rescue Mutual Aid Coordination Network**

**Eligibility:** Fire Mutual Aid Coordinators at the State, regional, and Operational Area levels.

The Cal EMA Fire and Rescue Mutual Aid Coordination Network is known as FIRE Net. It was formerly known as the Office of Emergency Services (OES) FIRE. FIRE Net is a dedicated radio network to support the Fire and Rescue Mutual Aid System. Cal EMA FIRE Net supports the 65 Fire Operational Areas and the 6 Mutual Aid Regions as well as all Cal EMA fire engines and support vehicles.

For sustained operations authorization, contact the CalEMA Fire and Rescue Duty Officer via the Warning Center at 916-845-8911.

### **WHITE Fire**

**Eligibility:** Fire agencies.

The three WHITE channels are designated by the Federal Communications Commission as "Intersystem" channels, and are intended solely for interagency fire operations, i.e. mutual aid. WHITE 1 may be used under special conditions for alerting or warning and for announcements of special interest and is Command only otherwise. WHITE 2 and WHITE 3 are intended for on-scene use and mobile only.

### **FIREMARS**

**Eligibility:** Fire agencies.

The Fire Mutual Aid Radio System (FIREMARS) consists of two repeated channels (one statewide, one usable in the 48 northern counties) in the 800 MHz spectrum for fire and emergency medical services (EMS) communications. Fire Department UHF Mutual Aid (FDUMA) is the implementation of FIREMARS UHF in Los Angeles County. It was named to differentiate it from other FIREMARS channels without having to resort to using a numeric identifier after the channel name. Use of FDUMA is restricted to Los Angeles County.

### **HEAR**

**Eligibility:** Any agency that delivers medical services.

The basic usage of Hospital Emergency Administrative Radio System (HEAR) is limited to communications between hospitals

and ambulances or, in cases of large-scale and disaster operations, between hospitals intended for emergency traffic. Certain areas of California have established separate operational plans that supersede the basic plan.

**Cal EMA HF**

**Eligibility:** All California state agencies that have emergency assignments during periods of disasters and have a requirement to communicate with other California agencies.

The Cal EMA High Frequency (HF) system is a fixed omnidirectional simplex radio system maintained at the Regional Emergency Operation Centers and State Operations Centers.

**STACOM**

**Eligibility:** State civil defense and emergency management agencies.

As part of Cal EMA HF, the State Communications System (STACOM) HF (2-8 MHz) system is designed to provide point-to-point emergency radio communications coverage across the State. This system implements the FCC "State Emergency Capability Using Radio Effectively" ("Operation SECURE") capability and is licensed and operated in accordance with FCC Rules Part 90 - Private Land Mobile Services and in accordance with FCC Public Notice 2419. STACOM is not used for routine operation.

**California Medical Mutual Aid Plan**

The California Medical Mutual Aid Plan documents the formal structures, policies, procedures and constraints under which California's government units provide medical resources to local governments impacted by disasters. It provides an overview of the disaster medical system, listing which agencies and personnel participate in the system, laying out roles and responsibilities, and explaining the mutual aid procedures. The California Medical Mutual Aid Plan provides a plan and communication capabilities for the interchange and dissemination of disaster medical-related data, directives, and information between medical officials of local, State, and federal agencies. It can be downloaded at

<http://www.emsa.ca.gov/pubs/>

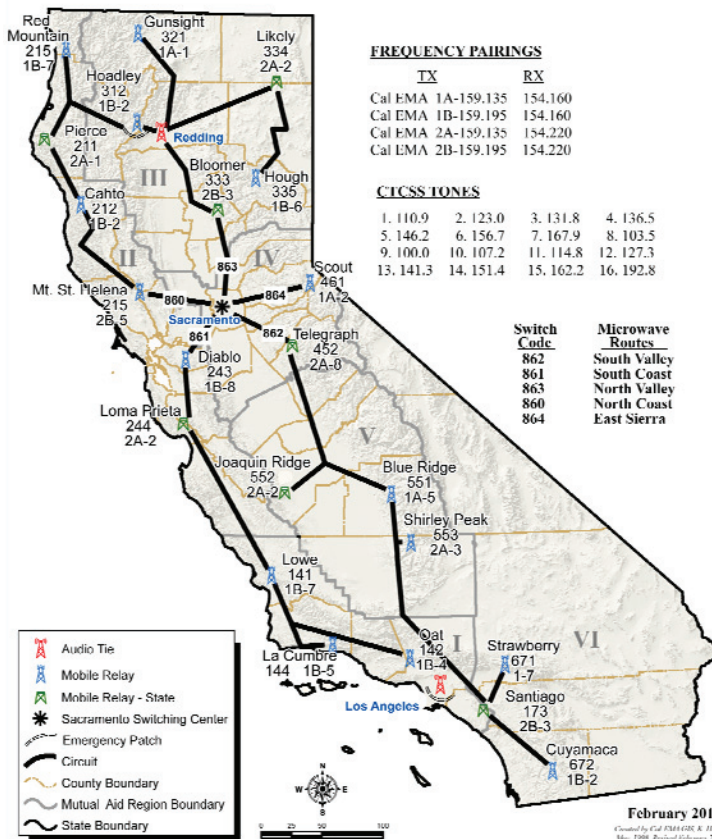
## Chapter 4 - Statewide System Maps



### FIRE MUTUAL AID RADIO SYSTEM (FireMARS)

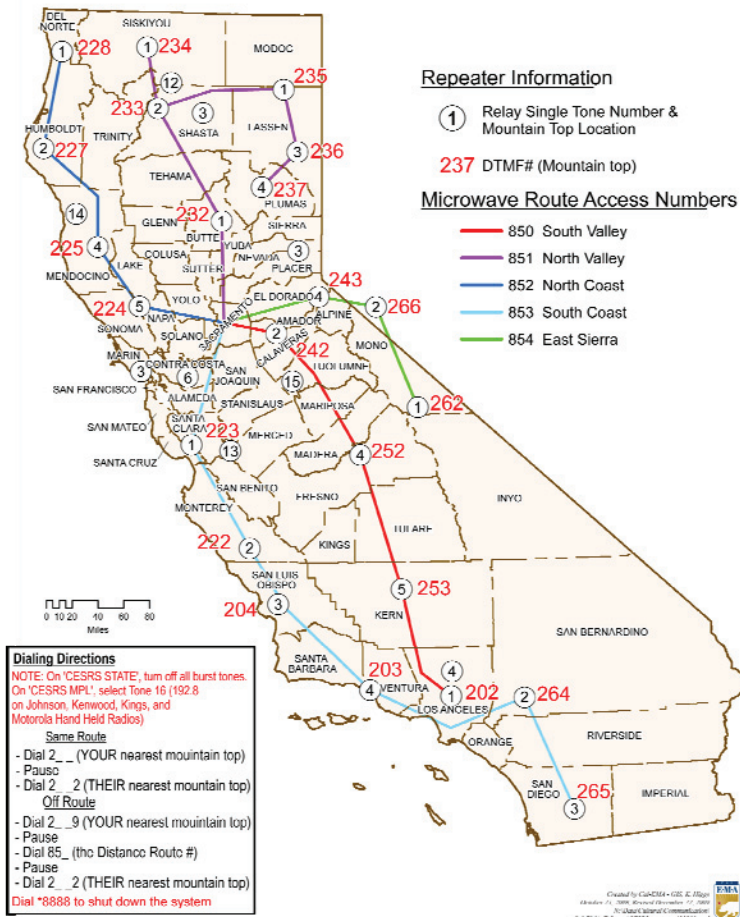


**California Emergency Management Agency  
FIRE & RESCUE RADIO NETWORK  
MT. TOP REPEATERS - MICROWAVE CIRCUIT**



[illegible]

### CESRS ROUTING AND DIALING for use with State Vehicle Radios



## Chapter 5 - California CTCSS/NAC Plan

California's State agencies use the following standard 16 Continuous Tone-Coded Squelch System (CTCSS) tones for repeater access. These must be included for repeater use. These tones must be programmed on the transmit side ONLY of mobile and portable radios.

Tone	CTCSS	NAC <sup>1</sup>	Tone	CTCSS	NAC <sup>1</sup>
1	110.9	\$455	9	100.0	\$3E8
2	123.0	\$4CE	10	107.2	\$430
3	131.8	\$526	11	114.8	\$47C
4	136.5	\$555	12	127.3	\$4F9
5	146.2	\$5B6	13	141.3	\$585
6	156.7	\$61F	14	151.4	\$5EA
7	167.9	\$68F	15	162.2	\$656
8	103.5	\$40B	16	192.8	\$788
<sup>1</sup> Some radio manufacturers require a \$ and some do not when programming radios, check the requirements of your radio.					

**About CTCSS**

A CTCSS, or tone squelch, reduces channel traffic by filtering out other users using a different CTCSS tone or no CTCSS. Another form of coded squelch is Digital Coded Squelch (DCS), which, like CTCSS, is used with analog transmissions. The Network Access Code (NAC) is a feature of Project 25 digital radios and serves a function similar to CTCSS or DCS. There are two conventions to express NACs. One is to express the NAC value in hexadecimal notation, the other is to use decimal notation. There are two ways to indicate that a number is in hexadecimal notation, also known as "hex" or "base 16". One way is to precede the number with number with the "\$" character (this is the expression used throughout this document). Another is to precede the number with "0x" (zero and lowercase "x"). Still another is to follow the number with a subscript "16".

Different vendors use trademarked names for CTCSS and DCS:

Vendor	CTCSS	DCS
Motorola	Private Line (PL) <sup>®</sup>	Digital Private Line (DPL) <sup>®</sup>
Bendix/King	Channel Guard (CG) <sup>®</sup>	Digital Channel Guard (CDG) <sup>®</sup>
Kenwood	Quiet Talk (QT) <sup>®</sup>	Digital Quiet Talk (DQT) <sup>®</sup>

**About Project 25**

Project 25 (P25) is a set of digital land mobile radio standards produced through the joint efforts of the Association of Public Safety Communications Officials International (APCO), the National Association of State Telecommunications Directors (NASTD), and selected Federal Agencies, in cooperation with the Telecommunications Industry Association (TIA). P25 is an open architecture, user driven suite of standards that define digital radio communications system architectures. P25 radios were designed to improve spectral efficiency, provide backwards compatibility, provide a migration path, enhance interoperability, and improve vendor competition. P25 supports conventional and trunked operation, secure communications, and is available from multiple manufacturers.

### P25 Digital Codes

NAC	
\$293	Default NAC
\$F7E	Receiver will unsquelch with any incoming NAC
\$F7F	A repeater with this NAC will allow incoming signals to be repeated with the NAC intact

Talkgroup ID (TGID)	
\$0001	Default
\$0000	No-one, talkgroup with no users – used for individual call
\$FFFF	Talkgroup which includes everyone

Unit ID	
\$000000	No-one – never associated with a radio unit
\$000001-\$98767F	For general use
\$989680-\$FFFFFE	For talkgroup use or other special purposes
\$FFFFFF	Designates everyone – used when implementing a group call with a TGID3

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## Chapter 6 - Mutual Aid Radio System Call Signs

Listed below are the FCC call signs that should be used by portable and mobile units when using the state interoperability channels.

Channel Name	Call Sign
CALCORD	KB82490
CESRS	KG3310
FIRE Net	KC5112
FIREMARS	WPAT870
FIREMARS2	WPAT870
WHITE Fire (all)	KC5112
CLERS (VHF)	Limited <sup>1</sup>
SAR	KNCE436
CLEMARS 1	KK3942
CLEMARS 2	KK3942
CLEMARS 3	KK3942
CLEMARS 4 & 5	KK3942
CLEMARS 6	KK3942
CLEMARS 7	KK3942
CLEMARS 8 & 9	WPAT870
CLEMARS 20 & 21	WPAT870
CLEMARS 22	WIJ645
NALEMARS	KK3942
HEAR (EMS/Med)	KNCE436
VCALL/VTAC	WQEN775
UCALL/UTAC	WQEN775
ICALL/ITAC - 8CALL/8TAC	WPAT870
<sup>1</sup> Limited to CalEMA, CHP and DOJ at this time.	

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## Chapter 7 - ANSI/NPSTC Standardized Channel Naming Format

The National Public Safety Telecommunications Council (NPSTC) is a federation of 15 national public safety organizations whose mission is to improve public safety communications and interoperability through collaborative leadership. It has developed and vetted a standardized naming system for interoperability channels which has been submitted as a draft American National Standards Institute (ANSI) standard. Each FCC-designated interoperability channel in the Public Safety Radio Services (47 CFR Part 90) will have a unique name established according to a standardized format. This format will consist of a maximum of 8 characters: Btype##M. The format is broken down in the following table.

B- Spectrum Band	
The Spectrum Band Designator is a unique single alpha or numeric character to designate the public safety spectrum segment the channel is found within:	
L	VHF Low Band (30-50 MHz)
V	VHF High Band (150.8-162 MHz)
U	UHF Band (450-470 MHz)
7	700 MHz Public Safety Narrowband Voice Band (769-775/799-805 MHz)
8	800 MHz National Public Safety Planning Advisory Committee (NPSPAC) band after the rebanding process (806-809/851-854 MHz)
Type – Channel Use Designator	
The Channel Use Designator is an alphanumeric 3- or 4-place tag to signify the primary operational purpose of the channel.	
CALL	Channel is dedicated nationwide for the express purpose of interoperability calling only.
DATA	Channel is reserved nationwide for the express purpose of data transmissions only.
FIRE	Channel is primarily used for interagency incident communications by fire service licensees.

Type – Channel Use Designator	
GTAC	Channel is primarily used for interagency incident communications between public safety licensees and eligible non-governmental organizations (NGOs).
LAW	Channel is primarily used for interagency incident communications by police service licensee.
MED	Channel is primarily used for interagency incident communications by EMS licensee.
MOB	Channel is primarily used for on-scene interagency incident communications by any public safety licensee using vehicular repeaters (FCC Station Class MO3).
TAC	Channel is primarily used for interagency communications by any public safety eligible licensee.
TRVL	Channel is primarily used for interagency communications by any public safety eligible licensee to coordinate travel when responding to/from an incident outside of an agency's own jurisdiction.
## - Unique Channel Identifier	
The Unique Channel Identifier is a numeric 1- or 2-place tag to uniquely identify the specific channel. Channel identifiers are grouped by band segment as follows:	
1-9	VHF Low Band (30-50 MHz)
10-39	VHF High Band (150.8-162 MHz)
40-49	UHF Band (450-470 MHz)
50-89	700 MHz Public Safety Narrowband Voice Band (769-775/799-805 MHz)
90-99	800 MHz NPSPAC band after the rebanding process (806-809/851-854 MHz)
Note	Calling channels are channels ending in zero ("0")
M - Modifier	
The Modifier is a single alphanumeric tag to identify a modification to the default operation type on the channel/channel pair.	
D	Direct or "talk around" use (simplex operations on the output channel of a pair normally designated for half-duplex or mobile relay operations).

## Chapter 8 - State Radio Systems

The table below depicts channels that are licensed and managed by the State. They are statewide channels, except as noted, and require specific authorization for their use. They may be used for interoperability purposes as authorized.

Description	Channel Name	RX Frequency	TX Frequency	Location (CTCSS Tone)
Emergency Mgmt	CESRS	153.7550 W	154.9800 W	Multiple <sup>1</sup>
Emergency Mgmt	CESRSD	153.7550 W	153.7550 W	
Fire	Cal EMA (OES) 1	154.1600 W	154.1600 W	
Fire	Cal EMA (OES) 1A	154.1600 W	159.1350 W	Multiple <sup>1</sup>
Fire	Cal EMA (OES) 1B	154.1600 W	159.1950 W	Multiple <sup>1</sup>
Fire	Cal EMA (OES) 2	154.2200 W	154.2200 W	
Fire	Cal EMA (OES) 2A	154.2200 W	159.1350 W	Multiple <sup>1</sup>
Fire	Cal EMA (OES) 2B	154.2200 W	159.1950 W	Multiple <sup>1</sup>
Law Point-to-Point	CLERS 1	158.7900 W	155.4300 W	Cactus City (3), Santiago (1)
Law Point-to-Point	CLERS 2	155.0700 W	159.0300 W	Blue Ridge (1), Wolf (1)
Law Point-to-Point	CLERS 3	154.7100 W	155.6700 W	Brockway (1), Joaquin Ridge (3), Diablo (2)
Law Point-to-Point	CLERS 4	155.9100 W	158.7300 W	Government (3)
Law Point-to-Point	CLERS 5	155.7000 W	154.8150 W	Antelope (3), Hamaker (2), Hoadley (5), Horse (1), Likely (4), Shaffer (1)

Description	Channel Name	RX Frequency	TX Frequency	Location (CTCSS Tone)
Law Point-to-Point	CLERS 6	453.6750 W	453.6750 W	Cuyamaca (1), Bullion (4), Lowe (2), Red (2)
Law Point-to-Point	CLERS 7	453.8750 W	458.8750 W	Bloomer (1), Fremont (2), Tamalpais (3), Telegraph (4)
Law Point-to-Point	CLERS 8	453.8250 W	458.8250 W	Tamalpais (3)
<sup>1</sup> These systems use the State of California standard 16-tone Continuous Tone-Coded Squelch System (CTCSS) plan to select specific repeaters across the State. (#) The number in parentheses corresponds with the CTCSS tone located in the State of California Standard CTCSS Plan on page 5-1.				

## **Chapter 9 - California Conventional Radio Interoperability Channels**

### **Narrowbanding and Rebanding in California**

The FCC mandated that all Private Land Mobile Radio users operating between 150 MHz and 512 MHz (VHF High Band, UHF) move both voice and data channel operations to 12.5 kHz narrowband by January 1, 2013. Mandatory narrowbanding promotes the more efficient use of the VHF and UHF land mobile bands.

In July 2004, FCC adopted a comprehensive plan to reconfigure the 800 MHz band to address a growing problem of harmful interference to 800 MHz public safety communication systems caused by high-density commercial wireless systems.

California's emergency response community must work together to develop a plan that allows for a smooth transition to narrowbanding and for rebanding. The CalSIEC is working on a statewide plan and guidance for the State to follow. The Cal-IFOG includes both the pre-and post-narrowbanding and rebanding channels. Once the entire State transitions to narrowband and rebanded frequencies, the pre-narrowbanding and pre-rebanding tables will be removed.

#### **IMPORTANT NOTE:**

All the mutual aid channels identified can be temporarily linked utilizing the proper priority levels (except priority level 4) for the duration of test or exercises and incidents, emergencies or disasters to local government public safety channels either directly within a jurisdiction or utilizing the simplex frequencies between jurisdictions. They can also be linked to each other. None of these frequencies can be linked on a permanent or semi permanent basis. None of these frequencies can be linked on a permanent or semi permanent basis. For frequency management purposes, the use of the mutual aid frequencies for tests or exercises and incidents, emergencies or disasters must first be coordinated by Cal EMA (and then authorized or not) regardless if the actual equipment (fixed, mobile or temporary) is owned and/or licensed by Cal EMA or local governments. To coordinate the use of the frequencies, contact the Cal EMA Warning Center at (916) 845-8911.

VHF Low Band (Using Legacy Channel Names)				
Type	Legacy ID	Receive Freq (Output) <sup>1</sup>	Transmit Freq (Input) <sup>1</sup>	CTCSS Tone Hz <sup>2</sup>
LAW <sup>3</sup>	CLEMARS 7	39.4600 W	45.8600 W	156.7
LAW	CLEMARS 6	39.4600 W	39.4600 W	156.7
FIRE (Proposed)	None	39.4800 W	39.4800 W	156.7
LAW <sup>4</sup>	CLEMARS 7 Input	45.8600 W	45.8600 W	156.7
FIRE	None	45.8800 W	45.8800 W	156.7
<sup>1</sup> W indicates the bandwidth: W = 16 kHz modulation bandwidth (wideband) <sup>2</sup> Default operation should be carrier squelch receive, CTCSS transmit. If the user can enable/disable without reprogramming the radio, the indicated CTCSS tone should also be programmed for receive, and the user instructed how and when to enable/disable. <sup>3</sup> In California, CLEMARS 7 is a repeater channel composed of nationwide interoperability channels LLAW1 and LLAW3. <sup>4</sup> This channel is used as the repeater input for CLEMARS7. Do not use for simplex (direct) communication in California.				

VHF Low Band (Using California Channel Names)				
Type	Standard CA ID (Short Name)	Receive Freq (Output) <sup>1</sup>	Transmit Freq (Input) <sup>1</sup>	CTCSS Tone Hz <sup>2</sup>
LAW <sup>3</sup>	LLAW1 (LLAW1)	39.4600 W	45.8600 W	156.7
LAW <sup>4</sup>	LLAW1D (LLAW1D)	39.4600 W	39.4600 W	156.7
FIRE (Proposed)	LFIRE2 (LFIRE2)	39.4800 W	39.4800 W	156.7
LAW <sup>5</sup>	LLAW3D (LLAW3D)	45.8600 W	45.8600 W	156.7
FIRE	LFIRE4 (LFIRE4)	45.8800 W	45.8800 W	156.7
<sup>1</sup> W indicates the bandwidth: W = 16 kHz modulation bandwidth (wideband) <sup>2</sup> Default operation should be carrier squelch receive, CTCSS transmit. If the user can enable/disable without reprogramming the radio, the indicated CTCSS tone should also be programmed for receive, and the user instructed how and when to enable/disable. <sup>3</sup> In California, LLAW1 is used as a repeater, paired with nationwide LLAW3. <sup>4</sup> In the ANSI/NPSTC standard and NIFOG, this channel is known as LLAW1. The ID LLAW1D is used in California to distinguish this channel from the use of LLAW1 as a repeater. <sup>5</sup> In the ANSI/NPSTC standard and NIFOG, this channel is known as LLAW3. In California, this channel is used as the repeater input for CLEMARS7. Do not use for simplex (direct) communication in California.				

VHF High Band (Before Narrowbanding)				
Type	Legacy ID	Receive Freq (Output) <sup>1</sup>	Transmit Freq (Input) <sup>1</sup>	CTCSS Tone Hz <sup>2</sup>
CALL	VCALL	155.7525 N	155.7525 N	156.7
TAC	VTAC1	151.1375 N	151.1375 N	156.7
TAC	VTAC2	154.4525 N	154.4525 N	156.7
TAC	VTAC3	158.7375 N	158.7375 N	156.7
TAC	VTAC4	159.4725 N	159.4725 N	156.7
FIRE	WHITE 1	154.2800 W	154.2800 W	None
FIRE <sup>3</sup>	WHITE 2	154.2650 W	154.2650 W	None
FIRE <sup>3</sup>	WHITE 3	154.2950 W	154.2950 W	None
LAW	NALEMARS	155.4750 W	155.4750 W	None
LAW	CLEMARS 1	154.9200 W	154.9200 W	None
LAW <sup>4</sup>	CLEMARS 2	154.9350 W	154.9350 W	None
TAC	CALCORD	156.0750 W	156.0750 W	None
MED	HEAR	155.3400 W	155.3400 W	Various
<sup>1</sup> N or W indicates the bandwidth: N = 11.25 kHz modulation bandwidth (narrowband) W = 16 kHz modulation bandwidth (wideband) <sup>2</sup> Default operation should be carrier squelch receive, CTCSS transmit. If the user can enable/disable without reprogramming the radio, the indicated CTCSS tone should also be programmed for receive, and the user instructed how and when to enable/disable. <sup>3</sup> These channels are intended for on-scene use and mobile only. <sup>4</sup> This channel is restricted to portable (hand held) use, with a maximum of 10 watts output power.				

VHF High Band (After Narrowbanding)				
Type	Standard CA ID (Short Name)	Receive Freq (Output) <sup>1</sup>	Transmit Freq (Input) <sup>1</sup>	CTCSS Tone Hz <sup>2</sup>
CALL	VCALL10 (VCAL10)	155.7525 N	155.7525 N	156.7
TAC	VTAC11 (VTAC11)	151.1375 N	151.1375 N	156.7
TAC	VTAC12 (VTAC12)	154.4525 N	154.4525 N	156.7
TAC	VTAC13 (VTAC13)	158.7375 N	158.7375 N	156.7
TAC <sup>3</sup>	VTAC14 (VTAC14)	159.4725 N	159.4725 N	156.7
TAC <sup>4</sup>	VTAC17 (VTAC17)	161.8500 W	157.2500 W	156.7
TAC <sup>4</sup>	VTAC17D (VTAC17D)	161.8500 W	161.8500 W	156.7
FIRE	VFIRE21 (VFIR21)	154.2800 N	154.2800 N	None
FIRE <sup>5</sup>	VFIRE22 (VFIR22)	154.2650 N	154.2650 N	None
FIRE <sup>5</sup>	VFIRE23 (VFIR23)	154.2950 N	154.2950 N	None
FIRE	VFIRE24 (VFIR24)	154.2725 N	154.2725 N	156.7
FIRE	VFIRE25 (VFIR25)	154.2875 N	154.2875 N	156.7
FIRE	VFIRE26 (VFIR26)	154.3025 N	154.3025 N	156.7
MED	VMED28 (VMED28)	155.3400 N	155.3400 N	Various
MED	VMED29 (VMED29)	155.3475 N	155.3475 N	156.7
LAW	VLAW31 (VLAW31)	155.4750 N	155.4750 N	None
LAW	VLAW32 (VLAW32)	155.4825 N	155.4825 N	156.7

VHF High Band (After Narrowbanding)				
Type	Standard CA ID (Short Name)	Receive Freq (Output) <sup>1</sup>	Transmit Freq (Input) <sup>1</sup>	CTCSS Tone Hz <sup>2</sup>
LAW	CALAW1 (CALAW1)	154.9200 N	154.9200 N	None
LAW <sup>6</sup>	CALAW2 (CALAW2)	154.9350 N	154.9350 N	None
TAC	CALCORD (CACORD)	156.0750 N	156.0750 N	None
<sup>1</sup> N or W indicates the bandwidth: N = 11.25 kHz modulation bandwidth (narrowband) W = 16 kHz modulation bandwidth (wideband) <sup>2</sup> Default operation should be carrier squelch receive, CTCSS transmit. If the user can enable/disable without reprogramming the radio, the indicated CTCSS tone should also be programmed for receive, and the user instructed how and when to enable/disable. <sup>3</sup> If a repeater frequency is not available, substitute the corresponding talk around channel: VTAC14D for VTAC14 <sup>4</sup> Permitted use only in Reno VHF Public Coast Service Area #34, including the California counties of Alpine, Inyo, Lassen, Mono, Plumas, and Sierra. <sup>5</sup> These channels are intended for on-scene use and mobile only. <sup>6</sup> This channel is restricted to portable (hand held) use, with a maximum of 10 watts output power.				

UHF (Before Narrowbanding)				
Type	Legacy ID	Receive Freq (Output) <sup>1</sup>	Transmit Freq (Input) <sup>1</sup>	CTCSS Tone Hz <sup>2</sup>
CALL	UCALL	453.2125 N	458.2125 N	156.7
CALL	UCALLD	453.2125 N	453.2125 N	156.7
TAC	UTAC1	453.4625 N	458.4625 N	156.7
TAC	UTAC1D	453.4625 N	453.4625 N	156.7
TAC	UTAC2	453.7125 N	458.7125 N	156.7
TAC	UTAC2D	453.7125 N	453.7125 N	156.7
TAC	UTAC3	453.8625 N	458.8625 N	156.7
TAC	UTAC3D	453.8625 N	453.8625 N	156.7
LAW	CLEMARS 5	460.0250 W	465.0250 W	Varies
LAW	CLEMARS 4	460.0250 W	460.0250 W	Varies
TAC <sup>3</sup>	SCMA C	484.2125 W	487.2125 W	167.9/146.2
TAC <sup>3</sup>	SCMA E	484.2125 W	487.2125 W	167.9/167.9
TAC <sup>3</sup>	SCMA N	484.2125 W	487.2125 W	167.9/156.7
TAC <sup>3</sup>	SCMA W	484.2125 W	487.2125 W	167.9/173.8
TAC <sup>3</sup>	SCMA D	484.2125 W	484.2125 W	167.9/167.9
LAW <sup>4</sup>	CLEMARS 22	484.2375 W	484.2375 W	156.7
FIRE <sup>5</sup>	FDUMA	487.2375 W	487.2375 W	156.7
<sup>1</sup> N or W indicates the bandwidth: N = 11.25 kHz modulation bandwidth (narrowband) W = 16 kHz modulation bandwidth (wideband) <sup>2</sup> Default operation should be carrier squelch receive, CTCSS transmit. If the user can enable/disable without reprogramming the radio, the indicated CTCSS tone should also be programmed for receive, and the user instructed how and when to enable/disable. <sup>3</sup> Small Cities Mutual Aid (SCMA) is only permitted for use in Los Angeles County. <sup>4</sup> Due to special license restrictions, this simplex channel is available only to Law Enforcement agencies with base stations located within 50 miles of Los Angeles City Hall (mobiles and portables within 80 miles). <sup>5</sup> Fire Department UHF Mutual Aid (FDUMA) is only permitted for use in Los Angeles County.				

UHF (After Narrowbanding)				
Type	Standard CA ID (Short Name)	Receive Freq (Output) <sup>1</sup>	Transmit Freq (Input) <sup>1</sup>	CTCSS Tone Hz <sup>2</sup>
CALL	UCALL40 (UCAL40)	453.2125 N	458.2125 N	156.7
CALL	UCALL40D (CAL40D)	453.2125 N	453.2125 N	156.7
TAC	UTAC41 (UTAC41)	453.4625 N	458.4625 N	156.7
TAC	UTAC41D (TAC41D)	453.4625 N	453.4625 N	156.7
TAC	UTAC42 (UTAC42)	453.7125 N	458.7125 N	156.7
TAC	UTAC42D (TAC42D)	453.7125 N	453.7125 N	156.7
TAC	UTAC43 (UTAC43)	453.8625 N	458.8625 N	156.7
TAC	UTAC43D (TAC43D)	453.8625 N	453.8625 N	156.7
LAW	CALAW4 (CALAW4)	460.0250 N	465.0250 N	Varies
LAW	CALAW4D (CLAW4D)	460.0250 N	460.0250 N	Varies
TAC <sup>3</sup>	SCMA C (SCMA C)	484.2125 N	487.2125 N	167.9/146.2
TAC <sup>3</sup>	SCMA E (SCMA E)	484.2125 N	487.2125 N	167.9/167.9
TAC <sup>3</sup>	SCMA N (SCMA N)	484.2125 N	487.2125 N	167.9/156.7
TAC <sup>3</sup>	SCMA W (SCMA W)	484.2125 N	487.2125 N	167.9/173.8
TAC <sup>3</sup>	SCMA D (SCMA D)	484.2125 N	484.2125 N	167.9/167.9
LAW <sup>3</sup>	CALAW5D (CLAW5D)	484.2375 N	484.2375 N	156.7
FIRE <sup>4</sup>	FDUMA (FDUMA)	487.2375 N	487.2375 N	156.7

### UHF (After Narrowbanding)

<sup>1</sup> N indicates the bandwidth:

N = 11.25 kHz modulation bandwidth (narrowband)

<sup>2</sup> Default operation should be carrier squelch receive, CTCSS transmit. If the user can enable/disable without reprogramming the radio, the indicated CTCSS tone should also be programmed for receive, and the user instructed how and when to enable/disable.

<sup>3</sup> Small Cities Mutual Aid (SCMA) is only permitted for use in Los Angeles County.

<sup>4</sup> Fire Department UHF Mutual Aid (FDUMA) is only permitted for use in Los Angeles County.

### 700 MHz (Proposed)

Primary Use	ANSI/NPSTC ID	Receive Freq (Output) <sup>1</sup>	Transmit Freq (Input) <sup>1</sup>	NAC Hz <sup>2</sup>
CALL	7CALL50	769.G4375	799.G4375	
	7CALL50D	769.G4375	769.G4375	
TAC (secondary trunked)	7TAC51	769.F4375	799.F4375	
	7TAC51D	769.F4375	769.14375	
TAC (secondary trunked)	7TAC52	769.64375	799.64375	
	7TAC52D	769.64375	769.64375	
TAC (secondary trunked)	7TAC53	770.14375	800.14375	
	7TAC53D	770.14375	770.14375	
TAC (secondary trunked)	7TAC54	770.64375	800.64375	
	7TAC54D	770.64375	770.64375	
TAC	7TAC55	769.74375	799.74375	
	7TAC55D	769.74375	769.74375	
TAC	7TAC56	770.24375	800.24375	
	7TAC56D	770.24375	770.24375	
GTAC	7GTAC57	770.99375	800.99375	
	7GTAC57D	770.99375	770.99375	

700 MHz (Proposed)				
Primary Use	ANSI/NPSTC ID	Receive Freq (Output) <sup>1</sup>	Transmit Freq (Input) <sup>1</sup>	NAC Hz <sup>2</sup>
MOB	7MOB59	770.89375	800.89375	
	7MOB59D	770.89375	770.89375	
LAW	7LAW61	770.39375	800.39375	
	7LAW61D	770.39375	770.39375	
LAW	7LAW62	770.49375	800.49375	
	7LAW62D	770.49375	770.49375	
FIRE	7FIRE63	769.89375	799.89375	
	7FIRE63D	769.89375	769.89375	
FIRE	7FIRE64	769.99375	799.99375	
	7FIRE64D	769.99375	769.99375	
MED	7MED65	769.39375	799.39375	
	7MED65D	769.39375	769.39375	
MED	7MED66	769.49375	799.49375	
	7MED66D	769.49375	769.49375	
DATA	7DATA69	770.74375	800.74375	
	7DATA69D	770.74375	770.74375	
CALL	7CALL70	773.25625	803.25625	
	7CALL70D	773.25625	773.25625	
TAC (secondary trunked)	7TAC71	773.10625	803.10625	
	7TAC71D	773.10625	773.10625	
TAC (secondary trunked)	7TAC72	773.60625	803.60625	
	7TAC72D	773.60625	773.60625	
TAC (secondary trunked)	7TAC73	774.10625	804.10625	
	7TAC73D	774.10625	774.10625	
TAC (secondary trunked)	7TAC74	774.60625	804.60625	
	7TAC74D	774.60625	774.60625	

700 MHz (Proposed)				
Primary Use	ANSI/NPSTC ID	Receive Freq (Output) <sup>1</sup>	Transmit Freq (Input) <sup>1</sup>	NAC Hz <sup>2</sup>
TAC	7TAC75	773.75625	803.75625	
	7TAC75D	773.75625	773.75625	
TAC	7TAC76	774.25625	804.25625	
	7TAC76D	774.25625	774.25625	
GTAC	7GTAC77	774.85625	804.85625	
	7GTAC77D	774.85625	774.85625	
MOB	7MOB79	774.50625	804.50625	
	7MOB79D	774.50625	774.50625	
LAW	7LAW81	774.00625	804.00625	
	7LAW81D	774.00625	774.00625	
LAW	7LAW82	774.35625	804.35625	
	7LAW82D	774.35625	774.35625	
FIRE	7FIRE83	773.50625	803.50625	
	7FIRE83D	773.50625	773.50625	
FIRE	7FIRE84	773.85625	803.85625	
	7FIRE84D	773.85625	773.85625	
MED	7MED86	773.00625	803.00625	
	7MED86D	773.00625	773.00625	
MED	7MED87	773.35625	803.35625	
	7MED87D	773.35625	773.35625	
DATA	7DATA89	774.75625	804.75625	
	7DATA89D	774.75625	774.75625	
<sup>1</sup> Channel to be programmed 12.5 kHz modulation bandwidth in digital mode. <sup>2</sup> The National Interoperability Field Operations Guide, published by the U.S. Department of Homeland Security's Office of Emergency Communications, recommends the default NAC \$293 be programmed for transmit, and NAC \$F7E be programmed for receive. Once a national and/or State standard for NAC is established for these interoperable channels, it will be published in the "NAC Tone" column of this table.				

California-Only 800 MHz (Before Rebanding)				
Type	Legacy ID	Receive Freq (Output) <sup>1</sup>	Transmit Freq (Input) <sup>1</sup>	CTCSS Tone Hz <sup>2</sup>
LAW	CLEMARS 9	868.5125 W	823.5125 W	156.7
LAW	CLEMARS 8	868.5125 W	868.5125 W	156.7
FIRE	FIREMARS	868.9875 W	823.9875 W	156.7
FIRE	FIREMARSD	868.9875 W	868.9875 W	156.7
LAW <sup>3</sup>	CLEMARS 21	866.2000 W	821.2000 W	156.7
LAW <sup>3</sup>	CLEMARS 20	866.2000 W	866.2000 W	156.7
FIRE <sup>3</sup>	FIREMARS2	866.9125 W	851.9125 W	156.7
FIRE <sup>3</sup>	FIREMARS2D	866.9125 W	866.9125 W	156.7
<sup>1</sup> W indicates the bandwidth: W = 16 kHz modulation bandwidth (wideband) <sup>2</sup> Default operation should be carrier squelch receive, CTCSS transmit. If the user can enable/disable without reprogramming the radio, the indicated CTCSS tone should also be programmed for receive, and the user instructed how and when to enable/disable. <sup>3</sup> Permitted use only in the 48 northern California counties.				

California-Only 800 MHz (After Rebanding)				
Type	Standard CA ID (Short Name)	Receive Freq (Output) <sup>1</sup>	Transmit Freq (Input) <sup>1</sup>	CTCSS Tone Hz <sup>2</sup>
LAW	CALAW8 (CALAW8)	853.5125 W	808.5125 W	156.7
LAW	CALAW8D (CLAW8D)	853.5125 W	853.5125 W	156.7
FIRE	CAFIRE1 (CFIRE1)	853.9875 W	808.9875 W	156.7
FIRE	CAFIRE1D (CFIR1D)	853.9875 W	853.9875 W	156.7
LAW <sup>3</sup>	CALAW9 (CALAW9)	851.2000 W	806.2000 W	156.7
LAW <sup>3</sup>	CALAW9D (CLAW9D)	851.2000 W	851.2000 W	156.7
FIRE <sup>3</sup>	CAFIRE2 (CFIRE2)	851.9125 W	806.9125 W	156.7
FIRE <sup>3</sup>	CAFIRE2D (CFIR2D)	851.9125 W	851.9125 W	156.7
<sup>1</sup> W indicates the bandwidth: W = 16 kHz modulation bandwidth (wideband) <sup>2</sup> Default operation should be carrier squelch receive, CTCSS transmit. If the user can enable/disable without reprogramming the radio, the indicated CTCSS tone should also be programmed for receive, and the user instructed how and when to enable/disable. <sup>3</sup> Permitted use only in the 48 northern California counties.				

US and Canada 800 MHz (Before Rebanding)				
Type	Legacy ID	Receive Freq (Output) <sup>1</sup>	Transmit Freq (Input) <sup>1</sup>	CTCSS Tone Hz <sup>2</sup>
CALL	ICALL	866.0125 W	821.0125 W	156.7
CALL – Direct	ICALLD	866.0125 W	866.0125 W	156.7
TAC	ITAC 1	866.5125 W	821.5125 W	156.7
TAC – Direct	ITAC 1D	866.5125 W	866.5125 W	156.7
TAC	ITAC 2	867.0125 W	822.0125 W	156.7
TAC – Direct	ITAC 2D	867.0125 W	867.0125 W	156.7
TAC	ITAC 3	867.5125 W	822.5125 W	156.7
TAC – Direct	ITAC 3D	867.5125 W	867.5125 W	156.7
TAC	ITAC 4	868.0125 W	823.0125 W	156.7
TAC – Direct	ITAC 4D	868.0125 W	868.0125 W	156.7
<sup>1</sup> W indicates the bandwidth: W = 16 kHz modulation bandwidth (wideband) <sup>2</sup> Default operation should be carrier squelch receive, CTCSS transmit. If the user can enable/disable without reprogramming the radio, the indicated CTCSS tone should also be programmed for receive, and the user instructed how and when to enable/disable.				

US and Canada 800 MHz (After Rebanding)				
Type	ANSI/NPSTC ID (Short Name)	Receive Freq (Output) <sup>1</sup>	Transmit Freq (Input) <sup>1</sup>	CTCSS Tone Hz <sup>2</sup>
CALL	8CALL90 (CAL90)	851.0125 W	806.0125 W	156.7
CALL– Direct	8CALL90D (CAL90D)	851.0125 W	851.0125 W	156.7
TAC	8TAC91 (TAC91)	851.5125 W	806.5125 W	156.7
TAC– Direct	8TAC91D (TAC91D)	851.5125 W	851.5125 W	156.7
TAC	8TAC92 (TAC92)	852.0125 W	807.0125 W	156.7
TAC– Direct	8TAC92D (TAC92D)	852.0125 W	852.0125 W	156.7
TAC	8TAC93 (TAC93)	852.5125 W	807.5125 W	156.7
TAC– Direct	8TAC93D (TAC93D)	852.5125 W	852.5125 W	156.7
TAC	8TAC94 (TAC94)	853.0125 W	808.0125 W	156.7
TAC– Direct	8TAC94D (TAC94D)	853.0125 W	853.0125 W	156.7
<sup>1</sup> W indicates the bandwidth: W = 16 kHz modulation bandwidth (wideband) <sup>2</sup> Default operation should be carrier squelch receive, CTCSS transmit. If the user can enable/disable without reprogramming the radio, the indicated CTCSS tone should also be programmed for receive, and the user instructed how and when to enable/disable.				

UHF MED – Narrowband/Wideband			
Use	ID	Mobile Receive (Output) <sup>1</sup>	Mobile Transmit (Input) <sup>1</sup>
MED Common	MED-1	463.0000 N/W	468.0000 N/W
MED Common	MED-2	463.0250 N/W	468.0250 N/W
MED Common	MED-3	463.0500 N/W	468.0500 N/W
MED Common	MED-4	463.0750 N/W	468.0750 N/W
MED Common	MED-5	463.1000 N/W	468.1000 N/W
MED Common	MED-6	463.1250 N/W	468.1250 N/W
MED Common	MED-7	463.1500 N/W	468.1500 N/W
MED Common	MED-8	463.1750 N/W	468.1750 N/W
MED Common Dispatch	MED-9	462.9500 N/W	467.9500 N/W
MED Common Dispatch	MED-10	462.9750 N/W	467.9750 N/W
<p>Note: CTCSS tones across the State are currently non-standardized and vary among the various local and regional EMS Authorities. Radios equipped for use on these frequencies should incorporate Multiple CTCSS tones or Operator Selectable Tone capabilities, which allow the user to select appropriate CTCSS tones.</p> <p><sup>1</sup> N or W indicates the bandwidth: N = 11.25 kHz modulation bandwidth (narrowband analog) W = 16 kHz modulation bandwidth (wideband)</p>			

UHF MED – Narrowband			
Use	ID	Mobile Receive (Output) <sup>1</sup>	Mobile Transmit (Input) <sup>1</sup>
MED Common	MED-12	463.0125 N	468.0125 N
MED Common	MED-22	463.0375 N	468.0375 N
MED Common	MED-32	463.0625 N	468.0625 N
MED Common	MED-42	463.0875 N	468.0875 N
MED Common	MED-52	463.1125 N	468.1125 N
MED Common	MED-62	463.1375 N	468.1375 N
MED Common	MED-72	463.1625 N	468.1625 N
MED Common	MED-82	463.1875 N	468.1875 N
MED Common Dispatch	MED-92	462.9625 N	467.9625 N
MED Common Dispatch	MED-102	462.9875 N	467.9875 N
<p>Note: CTCSS tones across the State are currently non-standardized and vary among the various local and regional EMS Authorities. Radios equipped for use on these frequencies should incorporate Multiple CTCSS tones or Operator Selectable Tone capabilities, which allow the user to select appropriate CTCSS tones.</p> <p><sup>1</sup> N indicates the bandwidth: N = 11.25 kHz modulation bandwidth (narrowband analog)</p>			

STACOM			
Channel Name	RX Frequency <sup>1</sup>	TX Frequency <sup>1</sup>	Usage Details <sup>2</sup>
STACOM 1	7480 kHz	7480 kHz	Day and night. Primary channel
STACOM 2	7802 kHz	7802 kHz	Daytime. Use restricted to one hour before sunrise and one hour after sunset, local times
STACOM 3	5140 kHz	5140 kHz	Day and night
STACOM 4	2419 kHz	2419 kHz	Day and night
STACOM 5	2422 kHz	2422 kHz	Day and night
STACOM 6	2812 kHz	2812 kHz	Day and night
STACOM 7	2804 kHz	2804 kHz	Day and night
STACOM 8	2326 kHz	2326 kHz	Day and night. Interstate Coordination
STACOM 9	5195 kHz	5195 kHz	Day and night. Interstate Coordination. Limited to States of California, Nevada, Oregon, and Arizona.
STACOM 10	7805 kHz	7805 kHz	Day and night. Interstate Coordination
<p>State communications system (STACOM) is a high frequency single-side band radio system. For more information about STACOM, please refer to page 3-4.</p> <p><sup>1</sup> These channels use Upper Sideband (USB) modulation. The frequency shown is the suppressed carrier reference frequency.</p> <p><sup>2</sup> Due to the effects of the high frequency propagation, there may be periods when communication is difficult or noisy. In addition, interference from other users, both domestic and foreign, may be expected at times as the State does not have any claim to the exclusive use of any HF frequencies assigned. Due to these problems, alternate frequencies have been assigned by the FCC.</p>			

## **Chapter 10 - Federal Interoperability Channels**

### **Conditions for use of Federal Interoperability Channels**

Federal incident response (IR) and law enforcement (LE) channels are available for use among Federal agencies and between Federal agencies and non-Federal entities with which Federal agencies have a requirement to operate. These channels may not be used for interoperability with other State, regional, or local radio stations and should not be used as a substitute for regular mutual aid channels. Channels can be licensed to non-Federal entities to enable joint operations for IR and LE subject to the condition that federal agencies are involved in the incident and they have requested interoperability with the non-Federal public safety radio users. IR and LE channels are restricted to interoperability communications and are not authorized for administrative or routine use.

### **Modes for using Federal Interoperability Channels**

It is recommended that radio users use analog for all IR channels (CTCSS 167.9 Hz) and Law Enforcement (LE) channels LE A, LE 1, LE B, LE 10, and LE 16 (CTCSS 167.9 Hz). P25 digital should be used for the remaining LE channels, NAC \$68F. CTCSS should always be transmitted on the analog channels, but carrier squelch (CSQ, no CTCSS) should be used on receive. Radio users should consider enabling or disabling CTCSS on receive by a switch or button; otherwise they should use CSQ on receive.

***For more information on Federal Interoperability Channels, please refer to the National Interoperability Field Operations Guide (NIFOG).***

Federal VHF Incident Response (IR)				
Recommended Use (Subject to availability and local plans)	NTIA ID	Note	Mobile RX (MHz) (Output)	Mobile TX (MHz) (Input)
Incident Calling	NC 1 Calling	NC 1 CALL	169.5375	164.7125
Incident Command 1	IR 1		170.0125	165.2500
Medical Evacuation Control	IR 2		170.4125	165.9625
Logistics Control	IR 3		170.6875	166.5750
Interagency Convoy	IR 4		173.0375	167.3250
Incident Calling (Direct)	IR 5	Direct for NC 1 Calling	169.5375	169.5375
Incident Command 1 (Direct)	IR 6	Direct for IR 1	170.0125	170.0125
Medical Evacuation Control (Direct)	IR 7	Direct for IR 2	170.4125	170.4125
Logistics Control (Direct)	IR 8	Direct for IR 3	170.6875	170.6875
Interagency Convoy (Direct)	IR 9	Direct for IR 4	173.0375	173.0375
Default operations should be carrier squelch receive, CTCSS 167.9 transmit. If the user can enable/disable without reprogramming the radio, the indicated CTCSS tone should also be programmed for receive, and the user instructed how and when to enable/disable.				

Federal UHF Incident Response (IR)				
Recommended Use (Subject to availability & local plans)	NTIA ID	Note	Mobile RX (MHz) (Output)	Mobile TX (MHz) (Input)
Incident Calling	NC 2 Calling	NC 2 CALL	410.2375	419.2375
Ad Hoc Assignment	IR 10		410.4375	419.4375
Ad Hoc Assignment	IR 11		410.6375	419.6375
Search And Rescue (SAR) Incident Command	IR 12		410.8375	419.8375
Ad Hoc Assignment (Direct)	IR 13		413.1875	413.1875
Interagency Convoy (Direct)	IR 14		413.2125	413.2125
Incident Calling (Direct)	IR 15	Direct for NC 2 Calling	410.2375	410.2375
Ad Hoc Assignment (Direct)	IR 16	Direct for IR 10	410.4375	410.4375
Ad Hoc Assignment (Direct)	IR 17	Direct for IR 11	410.6375	410.6375
SAR Incident Command (Direct)	IR 18	Direct for IR 12	410.8375	410.8375
Default operations should be carrier squelch receive, CTCSS 167.9 transmit. If the user can enable/disable without reprogramming the radio, the indicated CTCSS tone should also be programmed for receive, and the user instructed how and when to enable/disable.				

Federal VHF Law Enforcement (LE)				
Type	NTIA ID	Note	Mobile RX (MHz) (Output)	Mobile TX (MHz) (Input)
CALL	LE A <sup>1</sup>	Analog	167.0875	167.0875
TAC	LE 1 <sup>1</sup>	Analog	167.0875	162.0875
TAC	LE 2		167.2500	162.2625
TAC	LE 3		167.7500	162.8375
TAC	LE 4		168.1125	163.2875
TAC	LE 5		168.4625	163.4250
TAC	LE 6	Direct for LE 2	167.2500	167.2500
TAC	LE 7	Direct for LE 3	167.7500	167.7500
TAC	LE 8	Direct for LE 4	168.1125	168.1125
TAC	LE 9	Direct for LE 5	168.4625	168.4625
<sup>1</sup> LE A and LE 1 are analog, with CTCSS 167.9 Tx and CSQ Rx. All other LE channels are digital with NAC \$68F.				

Federal UHF Law Enforcement (LE)				
Type	NTIA ID	Note	Mobile RX (MHz) (Output)	Mobile TX (MHz) (Input)
CALL	LE B <sup>1</sup>	Analog-Direct	414.0375	414.0375
TAC	LE 10 <sup>1</sup>	Analog	409.9875	418.9875
TAC	LE 11		410.1875	419.1875
TAC	LE 12		410.6125	419.6125
TAC	LE 13	Direct	414.0625	414.0625
TAC	LE 14	Direct	414.3125	414.3125
TAC	LE 15	Direct	414.3375	414.3375
TAC	LE 16 <sup>1</sup>	Direct for LE 10 – Analog	409.9875	409.9875
TAC	LE 17	Direct for LE 11	410.1875	410.1875
TAC	LE 18	Direct for LE 12	410.6125	410.6125
<sup>1</sup> LE B, LE 10, and LE 16 are analog, with CTCSS 167.9 Tx and CSQ Rx. All other LE channels are digital with NAC \$68F.				

Federal/Non-Federal Search and Rescue Command			
ID <sup>1</sup>	Mobile RX (MHz) (Output)	Mobile TX (MHz) (Input)	CTCSS
IR 12	410.8375	419.8375	167.9 Tx, CSQ Rx
VTAC14	159.4725	159.4725	156.7 Tx, CSQ Rx (156.7 Rx if user selectable)
UTAC43	453.8625	458.8625	156.7 Tx, CSQ Rx (156.7 Rx if user selectable)
8TAC94	868.0125 (853.0125 after rebanding)	823.0125 (808.0125 after rebanding)	156.7 Tx, CSQ Rx (156.7 Rx if user selectable)
VHF Marine Channel 17 <sup>2</sup>	156.8500 (this use requires FCC Special Temporary Authority)	156.8500 (this use requires FCC Special Temporary Authority)	
<sup>1</sup> If a repeater is not available, substitute the corresponding talk around channels: IR 18 for IR 12, UTAC43D for UTAC43, 8TAC94D for 8TAC94			
<sup>2</sup> VHF Marine channel 17 is wideband FM, emission 16K00F3E			

Federal/Non-Federal Search and Rescue Operations	
SAR Function	Frequency (MHz)
Ground Operations <sup>1</sup>	155.1600 (wideband FM)
Maritime Operations <sup>2</sup>	157.0500 or 157.1500 (VHF Marine ch.21A or 23A) as specified by U.S. Coast Guard (USCG) Sector Commander
Air Operations – civilian	123.1000 MHz AM (may not be used for tests or exercises)
Air Operations – USCG/Military	345.0 MHz AM for initial contact only, then move to 282.8 MHz AM or other working channel
Air Rescue Assets to Air Rescue Assets (deconfliction)	As chartered on standard air chart or MULTICOM 122.850 (south or west sector) & 122.900 MHz (north or east sector), or as specified by the Federal Aviation Administration (FAA). 122.850 may not be used for tests or exercises
Ground to Air SAR Working Channel	157.1750 (VHF Marine channel 82A)
Ground to Maritime SAR Working Channel <sup>3</sup>	157.0500 21A (23A, 81A, and 83A alternate as specified by local USCG Sector Commander)
Maritime/Air/Ground SAR Working Channel <sup>3</sup>	157.1750 83A (21A, 23A, and 81A alternate as specified by local USCG Sector Commander)
EMS/Medical Support*	155.3400 (wideband FM)
Hailing <sup>2</sup> & DISTRESS only – Maritime/Air/Ground	156.8000 VHF Marine channel 16
<sup>1</sup> Will transition to narrowband analog <sup>2</sup> Use VHF Marine channel 16 to make contact (30 seconds max), then move to the appropriate working channel as directed by the local USCG Sector Commander. Non-maritime use of any VHF Maritime channel requires FCC Special Temporary Authority or appropriate license. VHF marine channels use wideband FM. Emission 16K00F3E <sup>3</sup> VHF Marine channels: 21A = 157.0500 23A = 157.1500 81A = 157.0750 83A = 157.1750 MHz Direction from USCG, FCC, or FAA overrides information in this table. This table does not convey authority to operate.	

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## Chapter 11 - Statewide Interoperability Gateways

### Guidelines for Interoperability Channel Patching

1. Notify Cal EMA Telecommunications Duty Officer of any interoperability frequency needs.
2. Always secure permission from licensee before patching.
3. Consider terrain and other agencies effected and potential interference before patching.
4. Patching should usually be accomplished on tactical or command channels.
5. Always indicate patched channels on the ICS-205.
6. Because of co-channel interference and receiver desensitization, patching from a vehicle should be limited to one channel on low-band, VHF-high, UHF, and 800 due to rooftop antenna separation issues.
7. Generally, use low RF power when patching channels to reduce interference.
8. Continually monitor all patched channels for interference and other technical problems.
9. Only patch channels as long as necessary.
10. Always announce on the effected channels when the patch is brought up, brought down and when channels are added, or removed from the patch.

Cal EMA Mobile Interoperability Gateway Units (MIGUs)			
MIGU	Location	Address	Phone
MIGU-1 Mutual-Aid Region 1	Los Alamitos	{Not Operational Yet – Under Construction}	
MIGU-2 Mutual-Aid Region 2	San Mateo County	400 County Center Redwood City, CA 94063	650-363-4790
MIGU-3 Mutual-Aid Region 3	Colusa County	{Not Operational Yet – Under Construction}	

Cal EMA Mobile Interoperability Gateway Units (MIGUs)			
MIGU	Location	Address	Phone
MIGU-4 Cal EMA HQ	Mather	{Under Construction}	
MIGU-5	San Luis Obispo County	1525 Kansas Avenue San Luis Obispo, CA 93405	805) 781-4554
MIGU-6 Mutual-Aid Region 6	San Bernardino County	1743 West Miro Way Rialto, CA 92376	909-356-3998
ALL UNITS AVAILABLE THROUGH REQUEST TO THE CALIFORNIA STATE WARNING CENTER AT (916) 845-8911. Appropriate discipline (Fire, Law, EMS) contact will be notified for Mission Request and the Telecommunications Duty Officer will be notified.			

California Highway Patrol Raytheon JPS ACU-1000 Gateways in Rapid Response Vehicles (RRVs)		
Location	Address	Phone
RRV 1 - Northern	2485 Sonoma Street, Redding, CA 96001	(530) 225-2715
RRV 2 - Valley	11336 Trade Center Drive, Rancho Cordova, CA 95742	(916) 464-2090
RRV 3 - Golden Gate	1551 Benicia Road, Vallejo, CA 94591	(707) 648-4180
RRV 4 - Central	5179 North Gates Avenue, Fresno, CA 93722	(559) 277-7250
RRV 5 - Southern	411 N. Central Ave., #410, Glendale, CA 91203	(818) 240-8200
RRV 6 - Border	9330 Farnham Street, San Diego, CA 92123	(858) 650-3600
RRV 7 - Coastal	4115 Broad Street, #B-10, San Luis Obispo, CA 93401	(805) 549-3261
RRV 8 - Inland	847 E. Brier Drive, San Bernardino, CA 92408	(909) 806-2400
RRV 9 - Headquarters	601 North 7th Street, Sacramento CA 95811	(916) 843-4199

California Highway Patrol Raytheon JPS ACU-1000 Gateways in Communications Centers		
Location	Address	Phone
Headquarters	601 North 7th Street, Sacramento, CA 95811	(916) 843-4199
Bakersfield	4040 Buck Owens Blvd., Bakersfield, CA 93308	(661) 864-4400
Barstow	300 E. Mt. View, Barstow, CA 92311	(760) 255-8750
Bishop	469 S. Main Street, Bishop, CA 93514	(760) 872-5900
Border	7183 Opportunity Road, San Diego, CA 92111	(858) 637-3800
Capitol	State Capitol, Rm 1149, Sacramento, CA 95814	(916) 445-2895
Chico	995 Fir Street, Chico, CA 95928	(530) 879-1900
El Centro	2331 Highway 86, Imperial, CA 92251	(760) 482-2550
Fresno	1382 West Olive Avenue, Fresno, CA 93728	(559) 441-5400
Golden Gate	1551 Benicia Road, Vallejo, CA 94591	(707) 551-4100
Humboldt	255 East Samoa Blvd., Arcata, CA 95521	(707) 268-2000
Indio	79-650 Varner Road, Indio, CA 92203	(760) 772-8900
Inland	847 E. Brier Drive, San Bernardino, CA 92408	(909) 388-8000
Los Angeles	2901 W Broadway, Los Angeles, CA 90041	(323) 982-4900
Merced	1500 Bell Drive, Atwater, CA 95301	(209) 356-2900
Monterey	960 E. Blanco Road, Salinas, CA 93901	(831) 796-2160

California Highway Patrol Raytheon JPS ACU-1000 Gateways in Communications Centers		
Location	Address	Phone
Orange County	6681 Marine Way, Irvine, CA 92618	(949) 559-7888
Redding	2503 Cascade Blvd., Redding, CA 96003	(530) 242-3210
Sacramento	3165 Gold Valley Drive, Rancho Cordova, CA 95670	(916) 861-1300
San Luis Obispo	675 California Blvd., San Luis Obispo, CA 93401	(805) 593-3333
Stockton	3330 N. Ad Art Road, Stockton, CA 95215	(209) 943-8600
Susanville	472-400 Diamond Crest Road	(530) 257-9605
Truckee	10077 State Rte. 89 South, Truckee, CA 96161	(530) 582-7500
Ukiah	540 South Orchard Avenue, Ukiah, CA 95482	(707) 467-4000
Ventura	4656 Valentine Road, Ventura, CA 93003	(805) 477-4174
Yreka	1739 South Main Street, Yreka, Ca 96097	(530) 841-6000

## Chapter 12 - NOAA Weather Radio Broadcast

The National Oceanic and Atmospheric Administration (NOAA) Weather Radio broadcasts National Weather Service (NWS) warnings, watches, forecasts, and other non-weather-related hazard information 24 hours a day.

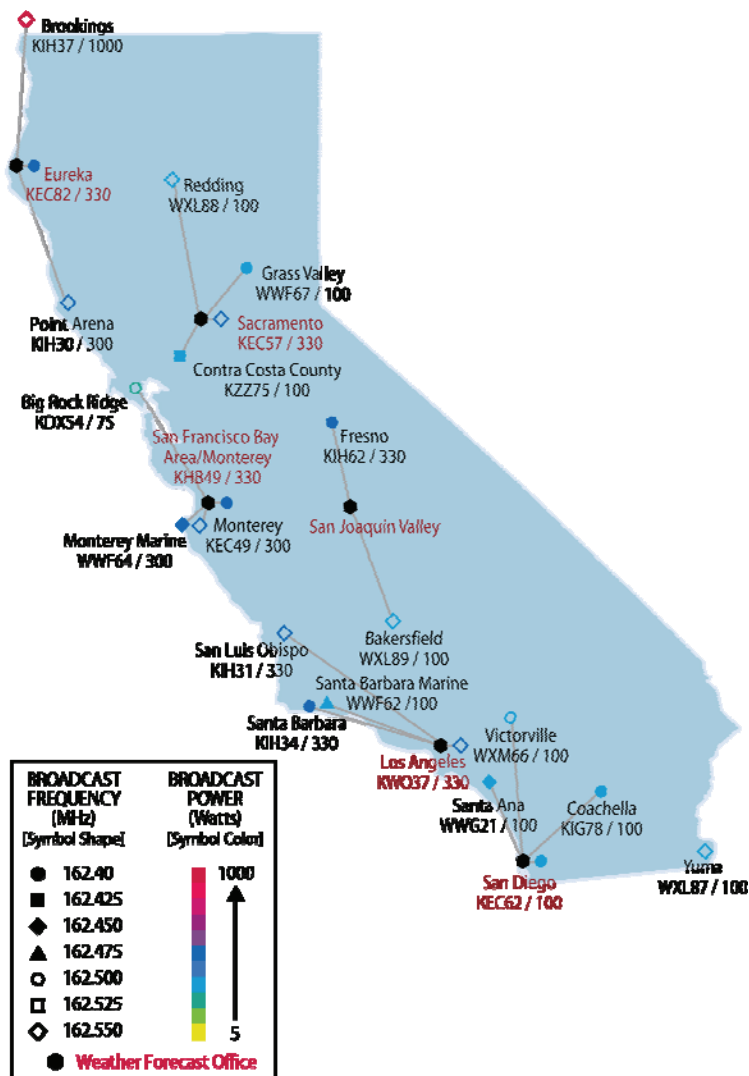
Weather Radio Broadcasts – Receive Only (WX1-WX7 US & Canada)						
WX1	WX2	WX3	WX4	WX5	WX6	WX7
162.400	162.425	162.450	162.475	162.500	162.525	162.550
Channels WX1 through WX7 are used in the United States and Canada. These channels should be programmed as RECEIVE ONLY. Some radio manufacturers number the U.S. weather channels in the order they came into use; others number them in frequency order. For programming in land mobile radios, frequency order is recommended.						

NOAA Weather Radio Transmitters				
Operational Area	Weather Radio Coverage Area	NWS Weather Forecast Office	Weather Radio Frequency (MHz)	Call Sign
Amador	Portions of MA-4/5 Counties	Sacramento	162.550	KEC57
Contra Costa	Delta Area/Carquinez Strait	Sacramento	162.425	KZZ75
Curry, OR	Del Norte/ Curry, OR	Eureka	162.550	KIH37
El Dorado/ Nevada	Lake Tahoe Basin/ East Nevada	Reno, NV	162.550	WXK58
Fresno	Portions of MA-5 Counties	Hanford	162.400	KIH62
Humboldt	Portions of Humboldt	Eureka	162.400	KEC82
Imperial	Imperial/Riverside	Phoenix, AZ	162.550	WXL87
Inyo	East Inyo	Las Vegas, NV	162.400	WNG634

NOAA Weather Radio Transmitters				
Operational Area	Weather Radio Coverage Area	Weather Service Forecast Office	Weather Radio Frequency (MHz)	Call Sign
Jackson, OR	Portions of MA-3 Counties	Medford, OR	162.475	WWF97
Kern	Parts Kern/Tulare/King	Hanford	162.550	WXL89
Kern	Parts Kern/San Bern/Inyo/Los Angeles	Hanford	162.425	WNG659
Lassen/Plumas	So.Lassen/East Plumas/Sierra	Reno, NV	162.450	WWG20
Los Angeles	Los Angeles/Orange	Oxnard	162.550	KWO37
Los Angeles	Marine Radio/Los Angeles	Oxnard	162.525	WNG58
Mariposa	Yosemite National Park	Hanford	162.450	KAD94
Mendocino	Portions of Mendocino/Lake	Eureka	162.550	KIH30
Mendocino	Portions of Mendocino/Lake	Eureka	162.475	WNG593
Mono	Mono	Reno, NV	162.475	WWF59
Mono	Mono	Reno, NV	162.575	WNG595
Monterey/Santa Cruz	Marine Radio Monterey Bay	Monterey	162.450	WWF64
Nevada	Portions of MA-3/4 Counties	Sacramento	162.400	WWF67
Orange	Orange/San Diego	San Diego	162.450	WWG21
Riverside	Riverside	San Diego	162.400	KIG78
Riverside	Spanish Language/Riverside	San Diego	162.525	WNG712

NOAA Weather Radio Transmitters				
Operational Area	Weather Radio Coverage Area	Weather Service Forecast Office	Weather Radio Frequency (MHz)	Call Sign
San Bernardino	East Inyo/San Bern	Las Vegas, NV	162.550	WXL36
San Bernardino	West Riverside/South/ West San Bern	San Diego	162.500	WXM66
San Bernardino	East Riverside/San Bern	Las Vegas, NV	162.400	KXI84
San Diego	San Diego	San Diego	162.400	KEC62
San Diego	Marine Radio/ San Diego	San Diego	162.425	WNG637
San Luis Obispo	San Luis Obispo	Oxnard	162.550	KIH31
San Luis Obispo	Marine Radio/ San Luis Obispo	Oxnard	162.525	WNG59
San Mateo	Portions of South Bay Area	Monterey	162.400	KHB49
San Francisco/ Marin/ Sonoma	Marine Radio/ Northern San Francisco Bay	Monterey	162.500	KDX54
Santa Barbara	Santa Barbara/Ventura	Oxnard	162.400	KIH34
Santa Barbara	Marine Radio/ Santa Barbara Channel	Oxnard	162.475	WWF62
Santa Cruz	Portions of Santa Cruz/Monterey/San Benito	Monterey	162.550	KEC49
Trinity/ Shasta/ Tehama	Potions of MA-3 Counties	Sacramento	162.550	WXL88
MA: Mutual Aid Region				

## NOAA Weather Radio Transmitters



## Chapter 13 - Contact Information

Cal EMA Contact Information	
Cal EMA Warning Center 24-hour number	(916) 845-8911
Cal EMA Telecommunications Duty Officer	(916) 845-8911

Auxiliary Communications Service
Cal EMA's Auxiliary Communications Services Program (ACS) is called the Reserve Communications Unit (RCU) and operates as the State Radio Amateur Civil Emergency Service (RACES) Unit. For more information, please visit <a href="http://www.calema.ca.gov">www.calema.ca.gov</a> and search "ACS." For ACS support during an emergency, call the Cal EMA Warning Center at (916) 845-8911.

Law Enforcement Mutual Aid Administrative Regions (916) 845-8700 or (916) 845-8911	
<b>Region I</b>	Los Angeles and Orange Counties
<b>Region I A</b>	San Luis Obispo, Santa Barbara, and Ventura Counties
<b>Region II</b>	Alameda, Contra Costa, Del Norte, Humboldt, Lake, Napa, Marin, Mendocino, Monterey, San Benito, San Francisco, San Mateo, Santa Clara, Santa Cruz, Solano, and Sonoma Counties
<b>Region III</b>	Butte, Colusa, Glenn, Lassen, Modoc, Plumas, Shasta, Sierra, Siskiyou, Sutter, Tehama, Trinity, and Yuba Counties
<b>Region IV</b>	Alpine, Amador, Calaveras, El Dorado, Nevada, Placer, Sacramento, San Joaquin, Stanislaus, Tuolumne, and Yolo Counties
<b>Region V</b>	Madera, Mariposa, Merced, Fresno, Kern, Kings, and Tulare Counties
<b>Region VI</b>	Imperial, Inyo, Mono, Riverside, San Bernardino, and San Diego Counties

Fire and Rescue Mutual Aid Regions	
<b>Region I</b> <b>(805) 445-1166</b>	Los Angeles, Orange, San Luis Obispo, Santa Barbara, and Ventura Counties
<b>Region II</b> <b>(925) 245-0420</b>	Alameda, Contra Costa, Del Norte, Humboldt, Lake, Napa, Marin, Mendocino, Monterey, Napa, San Francisco, San Mateo, San Benito, Santa Clara, Santa Cruz, Solano, and Sonoma Counties
<b>Region III</b> <b>(530) 345-4643</b>	Butte, Colusa, Glenn, Lassen, Modoc, Plumas, Shasta, Sierra Siskiyou, Sutter, Tehama, Trinity, and Yuba Counties
<b>Region IV</b> <b>(916) 845-8476</b>	Alpine, Amador, Calaveras, El Dorado, Nevada, Placer, Sacramento, San Joaquin, Stanislaus, Tuolumne, and Yolo Counties
<b>Region V</b> <b>(209) 966-5460</b>	Fresno, Kings, Kern, Madera, Mariposa, Merced, Tulare Counties
<b>Region VI</b> <b>(951) 320-2106</b>	Imperial, Inyo, Mono, Riverside, San Bernardino, and San Diego Counties

California Highway Patrol	
Emergency Notification and Tactical Alert Center (ENTAC) 24-hour number	(916) 843-4199

Caltrans	
Headquarters 24-hour Communications Center 1120 "N" Street, Room 3220 Sacramento, CA 95814	(916) 653-3442

Caltrans Transportation Management Centers (TMC)		
District	Address/Phone	Operation Hours
<b>District 1</b>	1656 Union Street Eureka, CA 95501 Telephone: (707) 441-5727	16 hours Monday through Friday, covering commute hours, and seasonally 24/7 during storms.

Caltrans Transportation Management Centers (TMC)		
District	Address/Phone	Operation Hours
<b>District 2</b>	1657 Riverside Drive Redding, CA 96001 Telephone: (530) 225-3273	16 hours Monday through Friday, covering commute hours, and seasonally 24/7 during storms.
<b>District 3</b>	3165 Gold Valley Drive Rancho Cordova, CA 95742 Telephone: (916) 859-7900	24/7
<b>District 4</b>	111 Grand Avenue Oakland, CA 94612 Telephone: (510) 286-6359	24/7
<b>District 5</b>	271 South Street San Luis Obispo, CA 93401 Telephone: (805) 549-3213	12 hours Monday through Friday covering commute hours, and seasonally 24/7 during storms.
<b>District 6</b>	1352 West Olive Avenue Fresno, CA 93728 Telephone: (559) 488-4152	24/7
<b>District 7</b>	2901 West Broadway Los Angeles, CA 90041 Telephone: (323)259-2352	24/7
<b>District 8</b>	464 West Fourth Street San Bernardino, CA 92401 Telephone: (909) 383-2594	24/7
<b>District 9</b>	500 South Main Bishop, CA 93514 Telephone: (760) 872-0718	12 hours Monday through Friday covering commutes hours, and seasonally 24/7 during storms.
<b>District 10</b>	1976 East Charter Way Stockton, CA 95205 Telephone: (209) 948-7556	24/7
<b>District 11</b>	7183 Opportunity Road San Diego, CA 92111 Telephone: (858) 467-3090	24 hours Monday through Friday, and seasonally 24/7 during storms.
<b>District 12</b>	6681 Marine Way Irvine, CA 92618 (949) 936-3600	24/7

Cellular Utilities	
<b>Sprint/Nextel</b>	24-hour Phone Number: (888) 639-0020 Sprint Emergency Response Team 24-hour support hotline (888) 639-0020
<b>Verizon</b>	Verizon Communications Response Team: (800) 981-9558 Significant Events Center: (949) 286-7378
<b>AT&amp;T</b>	Western Region Command Center 24-hour Number: (800) 832-6662
<b>T-Mobile</b>	Customer Service Number (877) 453-1304

## Chapter 14 - OASIS

The Operational Area Satellite Information System (OASIS) is a Cal EMA-owned system of satellite communications terminals located at each Operational Area, each Cal EMA EOC, select State Agency sites, and eight mobile units. The system provides voice and data communications via dedicated satellite access for emergency managers when other systems are overtaxed or fail.

OASIS Network Operations Center	
Via an OASIS Phone	3-1602 or 6-1602
Via a Commercial Telephone	(916) 845-8600 (OASIS Help Desk)

OASIS Phone Network Directory (rev. 9/2009)		
Mather Hub	PSTN Access into OASIS	(916) 366-5977
Mather Hub	OASIS Access Out to the PSTN	8-0201 - 8-0224

OASIS Phone Network Directory (rev. 9/2009)		
Site Location	Host Name	Extensions
Alameda County OES	alameda	2-0901 - 2-0908
Alpine County Sheriff's Office	alpine	4-5001 - 4-5008
Amador County OES	amador	4-5101 - 4-5108
Butte County	butte	3-6301 - 3-6308
Calaveras County	calaveras	4-5901 - 4-5908
Colusa County OES	colusa	3-5801 - 3-5808
Contra Costa County OES	contracosta	2-1101 - 2-1108
Del Norte County Sheriff's Office	delnorte	2-4401 - 2-4408
El Dorado County OES	eldorado	4-2501 - 4-2508
Fresno County EMS Dispatch	Fresno	5-5201 - 5-5208
Glenn County Sheriff's Office	glenn	3-5701 - 3-5708

OASIS Phone Network Directory (rev. 9/2009)		
Site Location	Host Name	Extensions
Humboldt County OES	humboldt	2-1201 - 2-1208
Imperial County OES	imperial	6-2601 - 6-2608
Inyo County Sheriff's Administrative Facility	inyo	6-2701 - 6-2708
Kern County Communications Division	kern	5-2801 - 5-2808
Kings County	kings	5-5301 - 5-5308
Lake County	lake	2-2901 - 2-2908
Lassen County	lassen	3-6501 - 3-6508
Los Angeles City OES	lacityoes	6-1301 - 6-1308
Los Angeles Co Emergency Operations Center	laeoc	6-1401 - 6-1408
Madera County Sheriff's Office	madera	5-4901 - 5-4908
Marin County Radio Shop	marin	2-0301 - 2-0308
Mariposa County Sheriff's Office	mariposa	5-6701 - 5-6708
Mendocino Co Emergency Service Authority	mendocino	2-4501 - 2-4508
Merced County	merced	5-6001 - 5-6008
Modoc County Sheriff's Office	modoc	3-5601 - 3-5608
Mono County OES	mono	6-3001 - 6-3008
Monterey County	monterey	2-3101 - 2-3108
Napa County	napa	2-3201 - 2-3208
Nevada County Sheriff's Department	nevada	4-3301 - 4-3308
Orange County Sheriff-Coroner Dept.	orangesherriff	6-1501 - 6-1508
Placer County Emergency Operations Center	placer	4-3401 - 4-3408
Plumas County	plumas	3-6401 - 3-6408

OASIS Phone Network Directory (rev. 9/2009)		
Site Location	Host Name	Extensions
Riverside County Emergency Services	riverside	6-0601 - 6-0608
Sacramento Co Emergency Operations Center	sac-ooo	4-3501 - 4-3508
San Benito County	sanbenito	2-3601 - 2-3608
San Bernadino Co Emergency Ops. Center	sanbern-eoc	6-0801 - 6-0808
San Diego County Emergency Ops. Center	sandiego	6-0701 - 6-0708
San Francisco OES	sanfran	2-0501 - 2-0508
San Joaquin County OES	sanjoaquin	4-1601 - 4-1608
San Luis Obispo County	sanluisobispo	6-4601 - 6-4608
San Mateo County Sheriff's OES	sanmateooes	2-1701 - 2-170
Santa Barbara County OES	santabarbara	6-1801 - 6-1808
Santa Clara County OES	santaclara	2-1901 - 2-1908
Santa Cruz County	santacruz	2-0401 - 2-0408
Shasta County - Shascom	shascom	3-3701 - 3-3708
Sierra County Sheriff's Office	sierra	3-6801 - 3-6808
Siskiyou County Sheriff's Office	siskiyou	3-5501 - 3-5508
Solano County Sheriff's Office	solano	2-3801 - 2-3808
Sonoma County OES	sonoma	2-2001 - 2-2008
Stanislaus County	stanislaus	4-4701 - 4-4708
Sutter County Sheriff's Office	sutter	3-6201 - 3-6208
Tehama County OES	tehama	3-3901 - 3-3908
Trinity County Sheriff's Office	trinity	3-6601 - 3-6608
Tulare County - California Dept. of Forestry	tulare	5-5401 - 5-5408

OASIS Phone Network Directory (rev. 9/2009)		
Site Location	Host Name	Extensions
Tuolumne County Sheriff's Office	tuolumne	4-6101 - 4-6108
Ventura County Sheriff's Department	ventura	6-2101 - 6-2108
Yolo County CESA	yolo	4-4001 - 4-4008
Yuba County OES	yuba	3-4101 - 3-4108

Special Units		
Site Location	Host Name	Extensions
California Institute of Technology Seismological Lab	caltech-seismo	6-1001 - 6-1008
US Geological Survey (Menlo Park)	sanmateousgs	2-7101 - 2-7108
UC Berkeley	ucberkeley	2-7001 - 2-7008
State Military Department - National Guard	sacnatlguard	4-7201 - 4-7208
Riverside County - Firescope	riverfscope	6-4801 - 6-4808
Shasta County - Firescope North	firescopenorth	3-0201 - 3-0208

CALTRANS		
Site Location	Host Name	Extensions
Caltrans HQ, Sacramento	caltrans-hq	4-2201 - 4-2208
Caltrans District 4, Oakland	caltransd4fixed	2-2301 - 2-2308
Caltrans District 7, Los Angeles	lcaltrans	6-2401 - 6-2408
Caltrans District 8, San Bernadino	caltransd8fixed	6-6901 - 6-6908

CALTRANS Transportables		
Site Location	Host Name	Extensions
Caltrans District 3	district3	7-0301 - 7-0324
Caltrans District 4	district4	7-0401 - 7-0424
Caltrans District 7	district7	7-0701 - 7-0724
Caltrans District 3	district3	7-0301 - 7-0324

Cal EMA HQ Mather			
Site Location	Host Name	Location	Extensions
CSWC	oescswc	State Warning Center	8-0401 & 8-0402
SOC Director / Deputy Director	oessoc	SOC Bldg A	8-0406
SOC Plans & Intelligence Chief	oessoc	SOC Bldg A	8-0405
SOC Administration & Finance Chief	oessoc	SOC Bldg A	8-0404
SOC Operations Chief	oessoc	SOC Bldg A	8-0408
SOC Mission Coordinator	oessoc	SOC Bldg A	8-0407
SOC Logistics Chief	oessoc	SOC Bldg A	8-0403
SOC DOT/CALTRANS Representative	oessoc	SOC Bldg A	8-0415
Law EOC	oeslaweoc	2nd Flr Bldg A	8-0411
Fire EOC	oesfireeoc	2nd Flr Bldg A	8-0410
Executive Conference Room	oesexec	2nd Flr Bldg B	8-0412
State Operations Communications Center	oessocc	SOCC Rm A139	8-0414

Cal EMA HQ Mather			
Site Location	Host Name	Location	Extensions
Telecommunications Branch Chief / EPI Studio	oesepi	SOCC Annex Rm A139-A	8-0413
Tcomm OASIS NOC	oesnoc	Radio Vault & Rm A139	8-0409
Tcomm Radio Vault	oestcmvault	Bldg A Radio Vault	8-0423
Tcomm OASIS Test Circuit	oestcmtest	Bldg A Radio Vault	8-0424

Cal EMA Southern Region			
Site Location	Host Name	Location	Extensions
SREOC Director	oessouthern	REOC Bldg 283	8-0301
SREOC Deputy Director	oessouthern	REOC Bldg 283	8-0302
SREOC Operations Chief	oessouthern	REOC Bldg 283	8-0303
SREOC SIT/STAT Unit Leader	oessouthern	REOC Bldg 283	8-0304
SREOC Personnel	oessouthern	REOC Bldg 283	8-0305
SREOC Procurement	oessouthern	REOC Bldg 283	8-0306
SREOC Resource Tracking	oessouthern	REOC Bldg 283	8-0307
SREOC Logistics Chief	oessouthern	REOC Bldg 283	8-0308
SREOC Deputy Operations Chief	oessouthern	REOC Bldg 283	8-0309
SREOC Care & Shelter Manager	oessouthern	REOC Bldg 283	8-0310
SREOC Construction Engineering	oessouthern	REOC Bldg 283	8-0311

Cal EMA Southern Region			
Site Location	Host Name	Location	Extensions
SREOC Cal EMA Fire & Rescue	oessouthern	REOC Bldg 283	8-0312
SREOC CALTRANS	oessouthern	REOC Bldg 283	8-0313
SREOC Cal EMA Law	oessouthern	REOC Bldg 283	8-0314
SREOC California National Guard	oessouthern	REOC Bldg 283	8-0315
SREOC FEMA {spare floater}	oessouthern	REOC Bldg 283	8-0316
SREOC Regional Administrator Office	oessouthern	REOC Bldg 283-East	8-0317
SREOC Regional Administrator Office	oessouthern	REOC Bldg 283-East	8-0318
SREOC Conference Room	oessouthern	REOC Bldg 283-East	8-0319
SREOC Conference Room	oessouthern	REOC Bldg 283-East	8-0320
SREOC Conference Room	oessouthern	REOC Bldg 283-East	8-0321
SREOC Conference Room	oessouthern	REOC Bldg 283-East	8-0322
SREOC Communications Center	oessouthern	REOC Bldg 283	8-0323
SREOC Communications Unit Leader	oessouthern	REOC Bldg 283	8-0324

Cal EMA Coastal Region			
Site Location	Host Name	Location	Extensions
CR Communications Coordinator	oescoastal	Office Cube	8-0101
CREOC Logistics	oescoastal	REOC	8-0106
CREOC Ops/Plans	oescoastal	REOC	8-0103
CREOC Sit Stat	oescoastal	REOC	8-0102
CREOC Ops	oescoastal	Main Conference Rm	8-0107
CREOC Med	oescoastal	Central Cubes	8-0104
CREOC Plans	oescoastal	REOC	8-0105
CREOC Communications Center	oescoastal	Communications Center	8-0108

Cal EMA Transportables			
Site Location	Host Name	Location <sup>1</sup>	Extensions
Cal EMA Comm 60	comm60	Tech Work Line 7-6024	7-6001 - 7-6023
Cal EMA Comm 61	comm61	Tech Work Line 7-6124	7-6101 - 7-6123
Cal EMA Comm 62	comm62	Tech Work Line 7-6224	7-6201 - 7-6223
Cal EMA Comm 63	comm63	Tech Work Line 7-6324	7-6301 - 7-6323
Cal EMA Comm 64	comm64	Tech Work Line 7-6424	7-6401 - 7-6423
<sup>1</sup> Tech Work Line is never issued for customer use.			

## Chapter 15 - Statewide System Dialing Instructions

OASIS Dialing Instructions	
From one OASIS phone to another OASIS phone	Dial: the 5-digit OASIS phone number
From an OASIS Phone to an Iridium Phone	Dial: 8-0201, wait for voice prompt Dial: 1-480-768-2500 When prompted, dial the 12-digit Iridium number (Be patient; you will hear another voice prompt and call status information, but you will not hear the phone ring.)
From an OASIS Phone to a Globalstar Phone	Dial: 8-0201, wait for voice prompt Then dial the 10-digit Globalstar number (1+ area code + 7-digit number) <sup>1</sup>
From an OASIS Phone to a SkyTerra Phone	Dial: 8-0201, wait for voice prompt Then dial the 10-digit SkyTerra number
From an OASIS Phone to a Public Switched Telephone Network Phone	Dial: 8-0201, wait for voice prompt Then dial the 10-digit phone number <sup>2</sup>
From an OASIS Phone to Cell Phone	Dial: 8-0201, wait for voice prompt Then dial the 10-digit cell number <sup>2</sup>
<p>Note: OASIS is limited to "line of site" access to a geosynchronous satellite. It can be hampered by fog, rain, or obstructions such as rock overcrop or valley site locations.</p> <p><sup>1</sup> On the SkyTerra phones, the '500' area codes are for unit-to-unit communications only.</p> <p><sup>2</sup> When dialing a number within the '916' area code, do not dial '1' or the area Code.</p>	

Iridium Dialing Instructions	
From one Iridium Phone to another Iridium Phone	Dial: 0, 0, and then the 12-digit Iridium number
From an Iridium Phone to an OASIS Phone	Dial: 0, 0, 1, and then 916-366-5977, wait for voice prompt Then dial the 5-digit OASIS number
From an Iridium Phone to a Globalstar Phone	Dial: 0, 0, 1 and then the 10-digit Globalstar number
From an Iridium Phone to a SkyTerra Phone	Dial: 0, 0, 1, and then the 800 area code (including 866, 877, 888) Then dial the 7-digit number <sup>1</sup>
From an Iridium Phone to a Public Switched Telephone Network Phone	Dial: 0, 0, 1, and then the 10-digit phone number
From an Iridium Phone to a Cell Phone	Dial: 0, 0, 1, and then the area code then dial the 10-digit cell number
Note: Call 611 from any unit (except OASIS) for any ops issues on that unit or the system.	
<sup>1</sup> On the SkyTerra phones, the '500' area codes are for unit-to-unit communications only.	

Globalstar Phone Dialing Instructions	
From one Globalstar Phone to another Globalstar Phone	Dial: 1 and then the 10-digit Globalstar number
From a Globalstar Phone to an OASIS Phone	Dial: 1-916-366-5977, wait for voice prompt then dial the 5-digit OASIS number
From a Globalstar Phone to an Iridium Phone	Dial: 1-480-768-2500, wait for voice prompt Then dial the 12-digit Iridium number (Be patient; you will hear another voice prompt and call status information, but you will not hear the phone ring.)
From a Globalstar Phone to a SkyTerra Phone	Dial: 1 and then the 800 area code (including 866, 877, 888) Then dial the 7-digit number <sup>1</sup>
From a Globalstar Phone to a Public Switched Telephone Network	Dial: 1 and then the 10-digit phone number
From a Globalstar Phone to a Cell Phone	Dial: 1 and then the 10-digit cell number
Note: Call 611 from any unit (except OASIS) for any ops issues on that unit or the system. <sup>1</sup> On the SkyTerra phones, the '500' area codes are for unit-to-unit communications only.	

SkyTerra Dialing Instructions (phone only – not the radio) <sup>1</sup>	
From one SkyTerra Phone to another Skyterra Phone	Dial: 1 then the area code 500 SkyTerra number
From a SkyTerra Phone to an OASIS Phone	Dial: 1-916-366-5977, wait for voice prompt Then dial the 5-digit OASIS number
From a SkyTerra Phone to an Iridium Phone	<i>NOTE: You must use the two-stage dialing.</i> Dial: 1-480-768-2500, wait for voice prompt Dial the 12-digit Iridium number (Be patient; you will hear another voice prompt and call status information, but you will not hear the phone ring.)
From a SkyTerra Phone to a Globalstar Phone	Dial: 1 and then the 10-digit Globalstar number
From a SkyTerra Phone to a Public Switched Telephone Network Phone	Dial: 1 and then the 10-digit phone number
From a SkyTerra Phone to a Cell Phone	Dial: 1 and then the 10-digit cell number
Note: Call 611 from any unit (except OASIS) for any ops issues on that unit or the system.	
<sup>1</sup> When dialing a number within the '916' area code, do not dial '1' or the area Code.	

Public Switched Telephone Network (PSTN) Phones Dialing Instructions	
From one PSTN Phone to another PSTN Phone	Dial: the PSTN phone number (remember 1 and area code, as required)
From a PSTN Phone to an OASIS Phone	Dial: 1-916-366-5977, wait for voice prompt Then dial the 5-digit OASIS number
From a PSTN Phone to an Iridium Phone	Dial 1-480-768-2500, wait for voice prompt Dial the 12-digit Iridium number (Be patient; you will hear another voice prompt and call status information, but you will not hear the phone ring.)
From a PSTN Phone to a Globalstar Phone	Dial: 1 and then the 10-digit Globalstar number
From a PSTN Phone to a SkyTerra Phone	Dial: 1 and then the 800 area code (including 866, 877, 888) Then dial the 7-digit number <sup>1</sup>
From a PSTN Phone to a Cell Phone	Dial: 1 and then the 10-digit cell number
Note: Call 611 from any unit (except OASIS) for any ops issues on that unit or the system. <sup>1</sup> On the SkyTerra phones, the '500' area codes are for unit-to-unit communications only.	

Cell Phone Dialing Instructions	
From one Cell Phone to another Cell Phone	Dial: the cell phone number (remember 1 and area code, as required)
From a Cell Phone to an OASIS Phone	Dial: 1-916-366-5977, wait for voice prompt Then dial the 5-digit OASIS number
From a Cell Phone to an Iridium Phone	<i>NOTE: You must use the two-stage dialing.</i> Dial 1-480-768-2500, wait for voice prompt Dial the 12-digit Iridium number (Be patient; you will hear another voice prompt and call status information, but you will not hear the phone ring.)
From a Cell Phone to a Globalstar Phone	Dial: 1 and then the 10-digit Globalstar number
From a Cell Phone to a SkyTerra Phone	Dial: 1 and then the 800 area code (including 866, 877, 888) Then dial the 7-digit number <sup>1</sup>
From a Cell Phone to a PSTN Phone	Dial: 1 and then the 10-digit phone number
Note: Call 611 from any unit (except OASIS) for any ops issues on that unit or the system. <sup>1</sup> On the SkyTerra phones, the '500' area codes are for unit-to-unit communications only.	

## Chapter 16 - GETS and WPS

The Government Emergency Telecommunications Service (GETS) enables personnel to complete a phone call with high probability when normal calling methods are unsuccessful.

Wireless Priority Service (WPS) is a priority calling capability that greatly increases the probability of call completion during an event while using their cellular phone.

GETS/WPS User Assistance: **1-800-818-4387 OR 1-703-818-4387**

### How to make a GETS Call

1. View PIN and the GETS access number on GETS Card
2. Access outside telephone line and dial 710 627 4387 (on cell phones: enter 710 627 4387 and push SEND key)
3. The call will be routed to one of the three GETS carriers. It may take 60+ seconds to connect to a GETS carrier during heavy network congestion
4. Listen for the tone, then enter the twelve digit PIN on front of GETS Card (do not enter # after last digit)
5. Listen for voice prompt: "Please enter your Destination Number now"
6. Enter the Destination Number (omit the 1 before the Area Code)
7. You will hear an announcement, "You are using GETS, AT&T/MCI/Sprint". Network will route your call to the destination telephone number -may take 60+ seconds after the announcement to connect to Destination Number during heavy network congestion

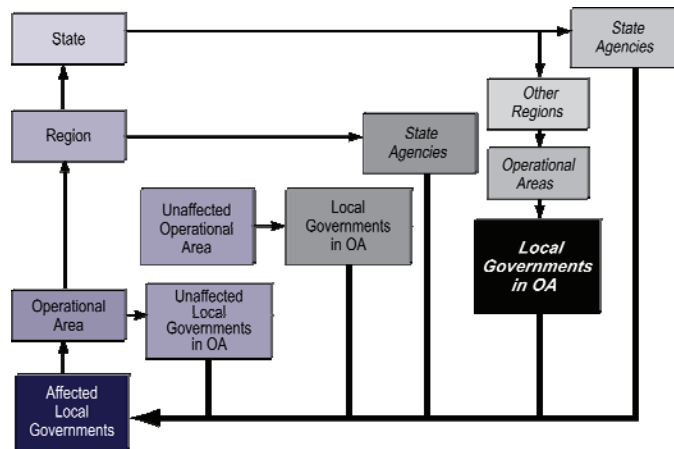
### How to make a WPS Call

1. Confirm radio signal on WPS subscribed cell phone
2. Enter \*272 + Destination Number and push SEND key (example: \*272 703 818 4387 + SEND)
3. Network will route call to the Destination Number –it may take 60+ seconds to connect the call. On most cell phones the screen will display \*272 + the Destination Number. Some phones may display call status messages such as *call queued* and/or provide audible tones indicating the call has been queued
4. If first attempt does not complete end the call and retry by pressing send key to auto redial; or add \*272 prefix to emergency numbers stored in cell phone contact list for quick dialing. Some cell phones automatically retry calls that do not complete –the screen message will indicate if the phone is re-trying the call

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## Appendix A - Reference and Planning Tools

### Mutual Aid System Concept: Flow of Requests and Resources Chart



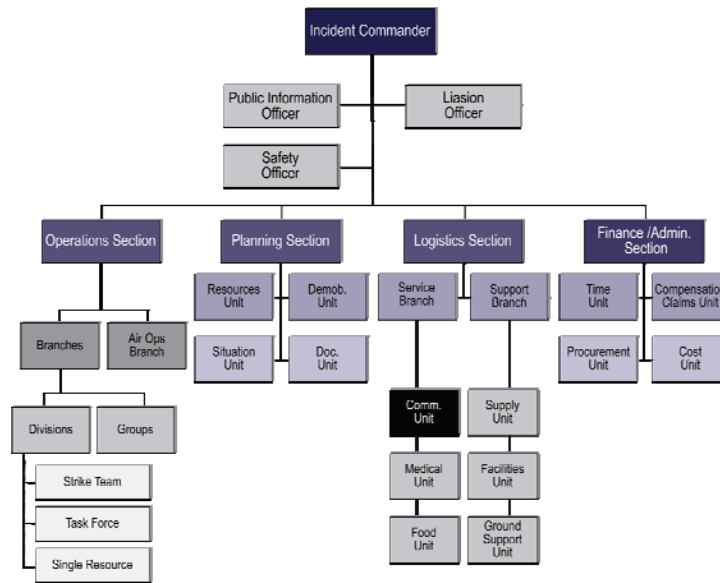
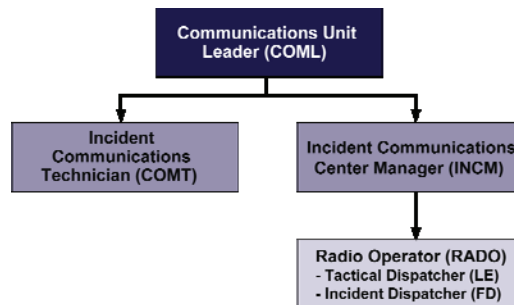
← Resource requests

OA - Operational Area

Notes: Local government may request mutual aid directly from other local governments where local agreements exist.

Discipline-specific mutual aid systems may have procedures that provide additional methods of obtaining state resources.

Volunteer and private agencies may be involved at each level.

**Incident Command System Structure****Regional Communications Unit Personnel  
Organizational Chart**

### **Communication Unit Leader Position Checklist**

The following checklist should be considered as the minimum requirements for the COML position. Note that some of the tasks are one-time actions while others are ongoing or repeated for the duration of the incident.

1. Obtain briefing from the Logistics Section Chief or Service Branch Director:
  - Organize and staff the unit as appropriate.
  - Assign Communications Center Manager and Lead Incident Dispatcher.
2. Assign Message Center Manager and ensure adequate staff is assigned to answer phones and attend fax machines.
3. Assess communications systems/frequencies in use; advise on communications capabilities and limitations.
4. Develop and implement effective communications procedures (flow) internal and external to the incident and Incident Command Post.
5. Assess the Incident Command Post's phone load and request additional lines as needed.
6. Prepare and implement an Incident Communications Plan (Incident Command System [ICS] Form 205):
  - Obtain a current organizational chart.
  - Determine the most hazardous tactical activity; ensure adequate communications.
  - Administer communications assignments to all other Operations elements, including volunteer, contract, or mutual aid.
  - Determine Command communications needs.
  - Determine support communications needs.
  - Establish and post any specific procedures for use of the Incident Command Post communications equipment.

7. Include cellular phones and pagers in the Incident Communications Plan (ICS Form 205 A), if appropriate:
  - Determine specific organizational elements to be assigned to telephones.
  - Identify all facilities/locations with which communications must be established (e.g., shelters, press area, liaison area, agency facilities, other governmental entities' Emergency Operations Centers). Identify and document phone numbers for each of these locations.
  - Determine which phones/numbers should be used by what personnel and for what purpose. Assign specific telephone numbers for incoming calls and report these numbers to staff and off-site parties such as other local jurisdictions, State and Federal agencies.
  - Do not publicize OUTGOING call lines.
8. Activate the volunteer radio organizations, serve as their contact point, and supervise their integration into the communications system.
9. Ensure radio and telephone logs are available and being used.
10. Determine the need for and research availability of additional nets and systems:
  - Order through the Supply Unit after approval by the Section Chief.
  - Federal systems: Additional radios and other communications devices, including repeaters, radiotelephone interconnects and satellite down-link capabilities may be available through the Federal Emergency Management Agency or the U.S. Department of Agriculture's Forest Service.
11. Document malfunctioning communications equipment and facilitate repairs.
12. Establish and maintain a communications equipment accountability system.

13. Provide technical information, as required, on:
  - Adequacy of communications system currently in use.
  - Geographic limitation on communications equipment.
  - Equipment capabilities.
  - Amount and types of equipment available.
  - Anticipated problems in the use of communications equipment.
14. Estimate the unit's needs for expected operations; order relief personnel.
15. Provide briefing to relief personnel on current activities and unusual situations.
16. Document all activity in a Unit Log (ICS Form 214).

**Communication Assets Survey and Mapping Information**

California's State and local emergency response agencies are completing a statewide capabilities assessment through the use of the Communication Assets Survey and Mapping (CASM) tool. CASM serves as a repository of information for State and local public safety communications assets and methods of interoperability.

The tool was developed by the Department of Homeland Security (DHS) Office of Domestic Preparedness to effectively analyze public safety communications equipment data, identify interoperability gaps in communications plans, and improve statewide and regional collaboration on solutions for improvement. CASM is administered by the DHS Office of Emergency Communication (OEC).

For your local CASM administrator, contact the California Interoperability Coordinator's Office (CICO) at [interop@calema.ca.gov](mailto:interop@calema.ca.gov).

## Appendix B - Plain Language Words and Phrases

Plain Language	Meaning or Usage
Affirmative	Yes
At scene	Used when a unit arrives at the scene of an incident.
Available	Used when a unit is ready for a new assignment or can return to quarters.
Available at residence	Used by administrative or staff personnel to indicate they are available and on-call at their residence.
Available at scene	Used when a unit is still committed to an incident, but could be dispatched to a new emergency if needed.
Burning operation	Used to indicate that a fire is started intentionally, usually by the fire department, to eliminate burnable fuels in order to prevent the spread of wildfires.
Can handle	Used when the amount of equipment needed to handle the incident is on-scene. Ex: "San Luis, Battalion 3412 can handle with units at scene."
Call _____ by phone	Self explanatory
Copy, copies	Used to acknowledge message received. Unit radio id must also be used. Ex: "Engine 2563 copies."
Disregard last message	Self explanatory
Emergency traffic	Term used to gain control of a radio frequency to report an emergency. All other radio users will refrain from using that frequency until cleared for use by a dispatcher or incident commander.
Emergency traffic only	Used by radio users to confine all radio traffic to an emergency in progress or a new incident.
Enroute	Normally used by administrative or staff personnel to designate destination. Enroute is not a substitute for responding.

Plain Language	Meaning or Usage
Fire under control	Used by the fire department to indicate that a fire is no longer increasing in size or complexity and no additional resources are required to extinguish it.
In-quarters, with station name or number	Used to indicate that a unit is in a station. Ex: "Oroville, Engine 2176 in-quarters, Jarbo Gap Station."
In-service	Indicates the unit is operating, but not in response to a dispatch. Ex: "San Andreas, Engine 4460, in-service, fire prevention inspections."
Is _____ available for a phone call?	Self explanatory.
Loud and clear	Self explanatory.
Negative	No.
Out-of-service	Indicates a unit is out of service. When the unit is back in service a phrase like the following example should be used: Ex: "Redding, Engine 2460, out-of-service, [give reason], [provide duration]."
Repeat	Used to ask for a transmission to be spoken again.
Report on conditions	Used by the fire department for a unit (usually the first arriving) to describe the incident in a concise manner, allowing other responders and dispatch to comprehend the incident.
Respond, Responding	Used during dispatch to direct units to proceed to an incident or to refer to units proceeding to an incident. Ex: "Engine 3365, respond...." or St. Helena, Engine 1475 responding."
Resume normal [radio] traffic	Self explanatory.
Return to _____	Normally used to direct units that are available to a station or other location.
Standby	Self explanatory.

Plain Language	Meaning or Usage
Stop transmitting	Self explanatory.
Uncovered	Indicates a unit is not in-service, because there are no personnel to operate it.
Unreadable	Used when signal received is not clear. Try to add the specific trouble. Ex: "Unreadable, background noise."
Vehicle registration check	Self explanatory.
Weather	Self explanatory.
What is your location?	Self explanatory.

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## Appendix C - Phonetic Alphabet Standards

Standard International		APCO	
A	Alpha	A	Adam
B	Bravo	B	Boy
C	Charlie	C	Charles
D	Delta	D	David
E	Echo	E	Edward
F	Foxtrot	F	Frank
G	Golf	G	George
H	Hotel	H	Henry
I	India	I	Ida
J	Juliett	J	John
K	Kilo	K	King
L	Lima	L	Lincoln
M	Mike	M	Mary
N	November	N	Nora
O	Oscar	O	Ocean
P	Papa	P	Paul
Q	Quebec	Q	Queen
R	Romeo	R	Robert
S	Sierra	S	Sam
T	Tango	T	Tom
U	Uniform	U	Union
V	Victor	V	Victor
W	Whiskey	W	William
X	X-ray	X	X-ray
Y	Yankee	Y	Young
Z	Zulu	Z	Zebra

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## Appendix D - Operational Area Data

The 58 Operational Areas are listed alphabetically.



**California Military Department****24-Hour Monitoring Facilities****Emergency-Activated 24-Hour Monitoring Suite**

Upon receipt of the California Emergency Management Agency (Cal EMA) mission number, the California Military Department monitors all bands of communication utilizing the Incident Commander's Command and Control Communications Unit (IC4U). The IC4U is manned 24 hours a day with military members of the California National Guard. The California Military Department call signs are mission specific and assigned as directed by Incident Commanders.

**Joint Operations Center (JOC) 24-hour Monitoring Suite:**

Telephone: (916) 854-3440

**Channel Capabilities**

California Military Department interoperability channels are determined by the ICS 205 for a particular incident.

VHF Low			
Type	Name	Frequency Range	CTCSS
Command & Control	Radio #11, #12 SINCGARS CFE AN/VRC 89A	30 – 88 MHz (Military) (150Hz Tone)	N/A
Command & Control	Radio #9 VHF - Lowband	35 – 50 MHz W	Variable

VHF High			
Type	Name	Frequency Range	CTCSS
Command & Control	Radio #3, #4 VHF	VHF 136 -174 MHz N/W	Variable

**California Military Department (con't)**

UHF			
Type	Name	Frequency Range	CTCSS
Command & Control	Radios #5, #6 UHF	450 - 512 MHz N/W	Variable
Command & Control	Radio #10 UHF	403 - 470 MHz N/W	Variable

HF			
Type	Name	Frequency Range	CTCSS
Command & Control	Transworld TW-7000	.5 – 30 MHz	N/A

HAM				
Type	Name	2 meter	70 cm	CTCSS
Command & Control	Radio #8 TMG 707	144.000-148.000 N/W	430.000-460.000 N/W	Variable

800 MHz			
Type	Name	Frequency Range	Mode
Command & Control	Radios #1,#2 800 MHz	806 – 870 MHz	Conventional

CB			
Type	Name	Channels 1-40	CTCSS
Command & Control	Radio #7 19 DX3 Cobra	26.965 – 27.405 MHz (AM)	N/A

**Shared Channels**

The California Military Department does **not** have shared channels.

**Alameda County Operational Area****24-Hour Monitoring Facilities**

The Alameda County Regional Emergency Communications Center (ACRECC) is a 24-hour monitoring facility. The primary point of contact for ACRECC is (925) 447-6880 (emergency) or (925) 447-4257 (non-emergency).

The center is known by the following call sign: “ALCO”

**Regularly Monitored Channels**

VHF High				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Fire	WHITE 1	154.2800 W	154.2800 W	None
Fire	VHF TAC 4	154.0700 W	154.0700 W	None
Fire	OES 1B	154.1600 W	159.1950 W	None

Motorola 800 Trunked Radio	
Type	Talkgroup Name
Fire	IA FIRE
EMS	IA EMS
EMS	CMED
Fire	CNTRL 1
Fire	CNTRL 2
Fire	CNTRL 4

**Shared Channel Infrastructure**

ACRECC maintains a console system with the ability to patch the channels listed above locally to any other locally controlled interoperability channels.

## Alpine County Operational Area

### 24-Hour Monitoring Facilities

The Alpine County Sheriff's Office provides 24-hour monitoring of Sheriff's Office-only channels through the Markleeville Dispatch Center (M-F, 8:00 a.m. - 5:00 p.m.) and Douglas County, Nevada Dispatch Center all other times. The Douglas County Dispatch Center is the County's designated 9-1-1 Public Safety Answering Point (PSAP) and transfers mutual aid and 9-1-1 traffic to the Markleeville Office when the office is open. Otherwise, Douglas Dispatch handles all traffic and relays.

These centers are known by the following call signs:

Alpine County Dispatch Center: **"Markleeville"**

Telephone: (530) 694-2231

Douglas County Dispatch Center: **"Douglas"**

Telephone: (775) 782-7891

### Regularly Monitored Channels

VHF High				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Law	CLEMARS 1	154.9200 W	154.9200 W	None

### Shared Channel Infrastructure

There are no shared gateways or channel banks in the Alpine OA's communications system. Alpine conducts interoperability via CLEMARS or the Sheriff's Office main frequency. Current interoperability is accomplished through shared programming VHF or the presence of CHP radios in all patrol vehicles. Alpine County is attempting to construct a new repeater system over the next three-to-five years, which will include microwave with full gateways and cross-county interoperability.

**Amador County Operational Area****24-Hour Monitoring Facilities**

Amador County does not provide 24-hour monitoring of interoperability channels. The Amador County Sheriff's Office Communications Center is the initial point of contact for all county law enforcement, fire, ambulance, and OES services throughout the Amador County OA as well as the after-hours contact for city police departments and the county public works department.

This center is known by the following call sign: "**Amador**"

**Countywide Coordinated Communications Center**

Telephone: (209) 223-6513

**CAL FIRE-Amador-El Dorado ECC**

This center is known by the following call sign: "**Camino**"

24/7 Telephone: (530) 647-5250

**Regularly Monitored Channels**

None

**Shared Channel Infrastructure**

No data currently available

## **Butte County Operational Area**

### **24-Hour Monitoring Facilities**

Butte County operates two 24-hour dispatch centers.

The Sheriff's dispatch, located in Oroville, operates countywide on all Sheriff's channels. The Butte County Sheriff's dispatch is known by the following call sign: "**Butte County**"

### **Butte County Emergency Management**

24/7 Telephone Sheriff Dispatch: (530) 538-7322

24/7 OASIS Sheriff Dispatch: 3-6301

The CAL-Fire-Butte County Fire dispatch, also located in Oroville, is a combined city/county countywide communications center.

The CAL-Fire-Butte County Fire dispatch is known by the following call sign: "**Oroville**"

### **CAL-Fire-Butte County Fire ECC**

24/7 Telephone: (530) 538-6460

### **Regularly Monitored Channels**

VHF High				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Law	CLEMARS 1	154.9200 W	154.9200 W	None
Fire	WHITE 1	154.2800 W	154.2800 W	None

### **Shared Channel Infrastructure**

Butte Operational Area Radio (BOAR)

VHF High - All Hazards Interoperability Radio System				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
All hazards	BOAR	151.4900 W	155.1150 W	Multiple

**Calaveras County Operational Area****24-Hour Monitoring Facilities**

Calaveras County does not provide 24-hour monitoring of interoperability channels. The Calaveras County Sheriff's Office Dispatch Center is the initial point of contact for all county law enforcement, fire, ambulance, and Office of Emergency Services (OES) throughout the Calaveras County Operational Area. The County Sheriff's Office Dispatch Center also serves as the after-hours contact for the city police department and the county public works department.

This center is known by the following call sign: "**Calaveras**"

**Calaveras County Sheriff's Office Dispatch Center**

Telephone: (209) 754-6500

**CAL FIRE-Tuolumne-Calaveras ECC**

This center is known by the following call sign: "**San Andreas**"

24/7 Telephone: (209) 754-1187

**Regularly Monitored Channels**

No data currently available

**Shared Channel Infrastructure**

No data currently available

## Colusa County Operational Area

### 24-Hour Monitoring Facilities

#### **Colusa County Sheriff's Office**

929 Bridge Street, Colusa, CA 95932

24-hour phone number: (530) 458-0200

Main Fax: (530) 458-4697

Alternative Fax: (530) 458-2665

The Colusa County Sheriff's Office is known by the following call sign: **"Colusa County"**

CLETS Mnemonic: CLS0

NLETS ORI: CA0060000

### Regularly Monitored Channels

VHF High				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Law	CLEMARS 1	154.9200 W	154.9200 W	None

UHF				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Law	CLERS	453.8750 W	458.8750 W	110.9
Law	CLEMARS 5 <sup>1</sup>	460.0250 W	465.0250 W	156.7
Tactical	UTAC41 <sup>1</sup>	453.4625 N	458.4625 N	156.7
<sup>1</sup> These channels are not always enabled. They are included in a multi-frequency radio and must be "selected" to enable the channel.				

### Shared Channel Infrastructure

No data currently available

**Contra Costa County Operational Area****24-Hour Monitoring Facilities**

Contra Costa County OA has two primary monitoring agencies within the county. The Contra Costa County Sheriff's Department and Contra Costa County Regional Fire Communications Center provide 24-hour monitoring of interoperability channels.

The Contra Costa County Sheriff's Department is known by the following call sign: **"Contra Costa Sheriff"**

Telephone: (925) 646-2441

The Contra Costa County Regional Fire Communications Center is known by the following call sign: **"CON FIRE"**

Telephone: (925) 941-3335

**Regularly Monitored Channels**

VHF				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Fire	WHITE 1	154.2800 W	154.2800 W	None

UHF – Law but available upon request				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Law	CLEMARS 5	460.0250 W	465.0250 W	156.7
Note: This is a local mutual aid channel to which the county sheriff's department controls access. It is available upon request.				

**Shared Channel Infrastructure**

Contra Costa Regional Fire Communications Center maintains a console system with the ability to patch the channels listed above locally to any other locally controlled interoperability channels. Each dispatch center has the ability to deploy gateways upon request.

## **Del Norte County Operational Area**

### **24-Hour Facilities**

#### **Emergency Services Dispatch**

Telephone: (707) 464-4191

#### **CAL FIRE-Humboldt-Del Norte ECC**

This center is known by the following call sign: “**Fortuna**”

24/7 Telephone: (707) 725-4412

### **Regularly Monitored Channels**

No data currently available

### **Shared Channel Infrastructure**

No data currently available

**El Dorado County Operational Area**

**24-Hour Facilities**

**Sheriff's Department**

Telephone: (530) 621-6600

**CAL FIRE-Amador-El Dorado ECC**

This center is known by the following call sign: "**Camino**"

24/7 Telephone: (530) 647-5250

**Regularly Monitored Channels**

No data currently available

**Shared Channel Infrastructure**

No data currently available

## **Fresno County Operational Area**

### **24-Hour Monitoring Facilities**

CAL FIRE-Fresno County Fire Protection District provides 24-hour monitoring of WHITE 1 from the CAL FIRE Emergency Communications Center (ECC). This center is the point of contact for all fire departments in Fresno County, with the exception of the following cities: Fresno, Clovis, Selma, Reedley, Firebaugh, Sanger, Kingsburg, and Coalinga.

This center is known by the following call sign: “**Fresno**”

### **Fresno CAL FIRE-Fresno County Fire Protection District ECC**

Telephone: (559) 294-2009

### **Fresno Fire Department Dispatch**

24/7 Telephone: (559) 253-7214

The Fresno County Sheriff's Office dispatch has a large range of contacts as part of its emergency plan and operations.

### **Fresno County Sheriff's Office**

24/7 Telephone: (559) 488-3111

### **Fresno Police Department Dispatch**

24/7 Telephone: (559) 498-1414

### **Regularly Monitored Channels**

VHF High				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Fire	WHITE 1	154.2800 W	154.2800 W	None
Law	CLEMARS 1	154.9200 W	154.9200 W	None
Law	NALEMARS	155.4750 W	150.7900 W	156.7

UHF				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Law	CLEMARS 4	460.0250 W	460.0250 W	Varies

**Fresno County Operational Area (con't)**

**Shared Channel Infrastructure**

Fresno County-wide LINK Channel (GOLDSTAR):  
SO1(154.659)/FPD8/CPD/CHP is a cross-banded channel for Sheriff, Fresno PD, Clovis PD, CHP, and Law Enforcement vehicles within Fresno County. For more information, please contact the local agency dispatch.

## Glenn County Operational Area

### 24-Hour Facilities

The Glenn County Sheriff's Office Communications Center is the initial POC for all County law enforcement, fire, medical and OES services. (Primary PSAP)

Call Sign: "**Glenn County**"

#### **24/7 Dispatch Center**

Telephone: (530) 934-6431

**24/7 OASIS:** 3-5701 - 3-5708

**CLETS mnemonic:** WIL0

**NLETS ORI:** CA0110000

#### **Office of Emergency Services**

Business Hours: (530) 934-6441

After Hours: (530) 934-6431

#### **CAL FIRE-Tehama-Glenn ECC**

This center is known by the following call sign: "**Red Bluff**"

24/7 Telephone: (530) 527-2241

### Regularly Monitored Channels

VHF High				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
LAW	CLEMARS 1	154.9200 N	154.9200 N	None

### Shared Channel Infrastructure

No data currently available

**Humboldt County Operational Area****24-Hour Monitoring Facilities****Sheriff Dispatch**

24-hour Telephone: (707) 445-7251

**CAL FIRE-Humboldt-Del Norte ECC**

This center is known by the following call sign: “Fortuna”

24/7 Telephone: (707) 725-4412

**Regularly Monitored Channels**

VHF High				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Law	CLEMARS 1	154.9200 W	154.9200 W	None

**Shared Channel Infrastructure**

No data currently available

## **Imperial County Operational Area**

### **24-Hour Facilities**

#### **Emergency Services Office**

Telephone (non-working hours): (760) 484-2420

#### **Imperial Fire Station #1**

Telephone: (760) 355-1164

The Imperial County Sheriff Department is known by the following call sign: **"Imperial County Sheriff"**

### **Regularly Monitored Channels**

VHF High				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Law	CLEMARS 1	154.9200 W	154.9200 W	None
Fire	WHITE 1	154.2800 W	154.2800 W	None

800 MHz				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Calling	I-CALL	866.0125 W	821.0125 W	156.7
Law	CLEMARS 9	868.5125 W	823.5125 W	156.7
Fire/EMS	FIREMARS	868.9875 W	823.9875 W	156.7

### **Shared Channel Infrastructure**

No data currently available

**Inyo County Operational Area**

**24-Hour Facilities**

**Emergency Operations Center**

Telephone: (760) 878-0383

**Regularly Monitored Channels**

No data currently available

**Shared Channel Infrastructure**

No data currently available

## Kern County Operational Area

### 24-Hour Monitoring Facilities

Kern County operates two 24-hour emergency dispatch centers. The Sheriff's Dispatch located in Bakersfield operates county-wide on all Sheriff channels.

The Kern Sheriff's dispatch is known by the following call sign: **"Control One"**

#### **Sheriff Dispatch**

Telephone: (661) 861-3110

The Fire Dispatch, also located in Bakersfield, is a combined city/county countywide communications center. Fire dispatches the departments of Kern County, the City of Bakersfield, and the City of California City.

Fire Dispatch is known by the following call sign: **"ECC"**

#### **Fire Dispatch**

Telephone: (661) 861-2521 and (661) 324-4542

### Regularly Monitored Channels

VHF High				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Law	CLEMARS 1	154.9200 W	154.9200 W	None
Fire	WHITE 1 <sup>1</sup>	154.2800 W	154.2800 W	None
<sup>1</sup> State White-1 is only monitored in the field by Fire on an as-needed basis.				

UHF				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Law	CLEMARS 5	460.0250 W	465.0250 W	131.8
Law	CLEMARS 5 Direct	460.0250 W	460.0250 W	None
County-wide simulcasted MA	Kern County Mutual Aid	453.2250 N	458.2250 N	131.8

**Kern County Operational Area (con't)****Shared Channel Infrastructure**

Type	Name	Rx (Output)	Tx (Input)	CTCSS
Law	Local Law VHF LB	45.0600 W	42.3800 W	136.5
Law	Local Law VHF HB	155.0100 W	158.7900 W	D-411
Law	LOCAL LAW UHF	453.7250 W	458.7250 W	131.8

Kern County, City of Bakersfield, and State of California operate on and monitor a tri-band mutual aid law enforcement channel in the greater Bakersfield area. The channel is called "Local Law." This channel is maintained by the communications shop in the City of Bakersfield.

The Kern County Police Chief's Association also operates under a Memorandum of Understanding (MOU) authorizing each law enforcement agency to operate on all other agency's radio frequencies. With the exception of Bakersfield and Ridgecrest Police Departments, all in-county police departments operate in the UHF Range II band. Ridgecrest Police Department is in the process of moving its operation to the UHF Range II band.

Kern County Police Chief's Association also operates with three gateway switches that can deploy when needed.

## **Kings County Operational Area**

### **24-Hour Monitoring Facilities**

Kings County provides 24-hour monitoring of interoperability channels through its Countywide Coordinated Communications Center, staffed by the Kings County Sheriff's Office. This center is the point of contact for Kings County Law Enforcement and Kings County Fire throughout the Kings County OA.

This center is known by the following call signs: "**Kings County**" or "**County Fire**"

### **Countywide Coordinated Communications Center**

Telephone: (559) 584-9276

### **CAL FIRE/Fresno County Fire Protection District ECC**

This center is known by the following call sign: "**Fresno**"

24/7 Telephone: (559) 294-2009

### **Regularly Monitored Channels**

VHF High				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Fire	WHITE 1 <sup>1</sup>	154.2800 W	154.2800 W	None
Fire	WHITE 2 <sup>1</sup>	154.2650 W	154.2650 W	None
MA	CALCORD <sup>1</sup>	156.0750 W	156.0750 W	None
<sup>1</sup> State White-1, White-2 and CALCORD are only monitored in the field by Fire on an-as-needed bases.				

UHF				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Law	CLEMARS 5	460.0250 W	465.0250 W	131.8

### **Shared Channel Infrastructure**

None

**Lake County Operational Area**

**24-Hour Facilities**

**Lake County Sheriff's Department**

Telephone: (707) 263-2690

**CAL FIRE-Sonoma-Lake-Napa ECC**

This center is known by the following call sign: "**St. Helena**"

24/7 Telephone: (707) 963-9636

**Regularly Monitored Channels**

No data currently available

**Shared Channel Infrastructure**

No data currently available

## **Lassen County Operational Area**

### **24-Hour Facilities**

#### **Susanville Interagency Fire Center**

Telephone: (530) 257-5575

#### **Lassen County Sheriff's Office**

Telephone: (530) 257-6121

### **Regularly Monitored Channels**

VHF High				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Law	CLEMARS 1 <sup>1</sup>	154.9200 W	154.9200 W	None
Fire	WHITE 1 <sup>2</sup>	154.2800 W	154.2800 W	None
<sup>1</sup> CLEMARS is monitored by the Lassen County Sherriff's Office. <sup>2</sup> White 1 is monitored by the Susanville Interagency Fire Center.				

### **Shared Channel Infrastructure**

No data currently available

**Los Angeles County Operational Area****24-Hour Monitoring Facilities****Los Angeles County Sheriff's Department**

Telephone: (866) 527-8277

(Contact via radio on RTC/SCC Access channel)

**California Highway Patrol**

Telephone: (323) 982-4971

**Los Angeles County Fire Department**

Telephone: (323) 881-2455

**Regularly Monitored Channels**

VHF High				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Law	CLEMARS 1 <sup>1</sup>	154.9200 W	154.9200 W	None
Fire	WHITE 1	154.2800 W	154.2800 W	None
Fire	Cal EMA 1B	154.1600 W	159.1950 W	None/136.5

<sup>1</sup> Monitored by the California Highway Patrol

**Shared Channel Infrastructure**

- CLEMARS 5 with CTCSS 156.7 is used for interoperability between Los Angeles County and Orange County. The Link is established at the Los Angeles County and Orange County communication centers
- CLEMARS 22 is used within the County of Los Angeles.
- UTAC42 458.7125 (repeater transmit)– 453.7125 (repeater receive) is used for interoperability between Los Angeles County and San Bernardino County. The Link is established at the Los Angeles County communication center and Claremont Police Department.
- All UCALL and UTAC channels are programmed into Los Angeles County Sheriff's radios.
- All Los Angeles County Fire Department radios have both VCALL/VTACs and UCALL/UTACs programmed into portable and mobile radios.

**Los Angeles County Operational Area (con't)**

**Los Angeles Regional Tactical Communications System (LARTCS)**

**Los Angeles Regional Tactical Communications System  
Contact and Activation Process**

When direct communications with other participating agencies is not available or after the desired agency has been contacted:

1. Contact SCC Watch Commander at (866) LARTCS7 (527-8277), or via SCC access channel.
2. Advise SCC whom you wish to communicate with.
3. Advise participating agency(ies) that LARTCS is active and the assigned channel/frequency.
4. Notify SCC and participating agency when activity is completed.

***LARTCS Channels and Frequencies***

Use of the LARTCS channels and frequencies can only be granted to agencies that have agreed to, and have submitted, a signed copy of the LARTCS Memorandum of Understanding (MOU). Failure to comply with the operating guidelines set forth in the MOU may be grounds for termination of the MOU.

The only exception to the above is for mutual aid agencies responding into Los Angeles County who have been requested through mutual aid and have a specific channel assignment.

VHF Low				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
LAW	CLEMARS7	39.4600 W	45.8600 W	156.7

VHF High				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
All Hzrd	LARTCS-3V	159.1800 W	155.5200 W	CSQ/100.0
All Hzrd	LARTCS -4V	159.0300 W	155.5800 W	CSQ/100.0
All Hzrd	LARTCS -5V	159.1500 W	155.3700 W	CSQ/100.0

VHF High				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
All Hzrd	LARTCS-3V (PR)	159.1800 W	155.5200 W	CSQ/MPL
All Hzrd	LARTCS-4V (PR)	159.0300 W	155.5800 W	CSQ/MPL
All Hzrd	LARTCS-5V (PR) (1)	159.1500 W	155.3700 W	CSQ/MPL
All Hzrd = All Hazards PR = Portable Repeater (1) LARTCS-5V should be used in West LA County (San Fernando and Santa Clarita Valleys) <u>only</u> .				

UHF 450-512 MHz				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
RTC Acc	LARTC ACC	483.5625 W	486.5625 W	CSQ/186.2
All Hzrd	LARTCS-1U	483.5875 W	486.5875 W	CSQ/186.2
All Hzrd	LARTCS-2U	484.0875 W	487.0875 W	CSQ/186.2
All Hzrd	LARTCS-3U	483.7875 W	486.7875 W	CSQ/186.2
All Hzrd	LARTCS-4U	484.1375 W	487.1375 W	CSQ/186.2
All Hzrd	LARTCS-5U	484.0625 W	487.0625 W	CSQ/186.2
All Hzrd	LARTCS-6U <sup>1</sup>	415.8000 W	406.8000 W	103.5
All Hzrd = All Hazards <sup>1</sup> UHF channel for Federal Agencies				

800 MHz				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
All Hzrd	ICALL SPH	866.0125 MW	821.0125 MW	156.7
All Hzrd	ITAC1 SPH	866.5125 MW	821.5125 MW	156.7/110.9
All Hzrd	ITAC2 SPH	867.0125 MW	822.0125 MW	156.7/110.9
All Hzrd	ITAC3 SPH	867.5125 MW	822.5125 MW	156.7/110.9
All Hzrd	ITAC4 SPH	868.0125 MW	823.0125 MW	156.7/110.9

800 MHz				
All Hzrd	ICALL VPK	866.0125 MW	821.0125 MW	156.7
Type	Name	Rx (Output)	Tx (Input)	CTCSS
All Hzrd	ITAC1 VPK	866.5125 MW	821.5125 MW	156.7/123.0
All Hzrd	ITAC2 VPK	867.0125 MW	822.0125 MW	156.7/123.0
All Hzrd	ITAC3 VPK	867.5125 MW	822.5125 MW	156.7/123.0
All Hzrd	ITAC4 VPK	868.0125 MW	823.0125 MW	156.7/123.0
All Hzrd = All Hazards SPH = San Pedro Hill VPK = Verdugo Peak "M" indicates mixed analog/digital mode.				

#### ***LFD Interoperability/Portable Repeater Vehicles (213) 485-6185***

The Los Angeles Fire Department staffs on an on-call basis the following interoperability equipment:

1. Suburban with ACU-1000, (2) Analog 800 MHz, (2) UHF Digital 450-482 MHz, (1) Digital 482-512 MHz, (2) Analog 148-174 MHz radios.
2. Suburban with ACU-1000, (2) Analog 800 MHz, (1) EDACS Trunked 800 MHz analog, (2) UHF Digital 450-520 MHz, (1) Digital 380-470 MHz, (2) Analog 136-174 MHz radios.
3. Repeater Trailer with four 100 watt 800 MHz repeaters & four UHF T-band repeaters.
4. Hum-V with Two portable 800 MHz repeaters.
5. Additional equipment:
  - a. 800 MHz portable repeaters.
  - b. VHF portable repeaters.

**Madera County Operational Area**

**24-Hour Facilities**

**Madera County Sheriff's Office**

General Telephone: (559) 675-7770

**Madera County on US Forest Service lands dispatch**

Telephone: (559) 348-1515

**CAL FIRE-Madera-Mariposa-Merced ECC**

This center is known by the following call sign: "Mariposa"

24/7 Telephone: (209) 966-3621

**Regularly Monitored Channels**

No data currently available

**Shared Channel Infrastructure**

Available radio capacity: ACU 1000 with UHF and VHF capacity and preloaded 7 county (central California) UHF and VHF; ACU with connectors for all major radio manufacturer portable radios.

## Marin County Operational Area

### 24-Hour Monitoring Facilities

#### Marin County Emergency Communications Center (ECC)

Telephone: (415) 499-6717

### Regularly Monitored Channels

VHF High				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Law	CLEMARS 1 <sup>1</sup>	154.9200 W	154.9200 W	None
Fire	WHITE 1 <sup>2</sup>	154.2800 W	154.2800 W	None
Fire	CalEMA 1 <sup>2</sup>	154.1600 W	154.1600 W	
<sup>1</sup> Monitored by the Marin County Sheriff's Communications Center.				
<sup>2</sup> Monitored by the Marin County Fire Department-ECC and Marin County Communications.				

800 MHz				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Calling	I-CALL <sup>1</sup>	866.0125 W	821.0125 W	156.7
<sup>1</sup> Monitored by the Marin County Fire Department-ECC and Marin County Communications.				

### Shared Channel Infrastructure

No data currently available

## Mariposa County Operational Area

### 24-Hour Monitoring Facilities

Mariposa County operates two 24-hour emergency interoperability dispatch channels.

The Sheriff's Dispatch Center is located in the town of Mariposa, which operates county-wide on all sheriff channels.

Mariposa Sheriff's Dispatch is known by the call sign "**Mariposa.**" Telephone: (209) 966-3614 or (209) 966-3615

The Fire Dispatch Center, also located in the town of Mariposa is a State-owned and operated center (Cal Fire). This center dispatches all Cal Fire resources in the county as well as all Mariposa County Fire Department and Mariposa Public Utility District equipment under contract.

Fire dispatch is also known by the call sign "**Mariposa**" Telephone: (209) 966-3621

### Regularly Monitored Channels

VHF High				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Law	CLEMARS 1	154.9200 W	154.9200 W	None
Fire	WHITE 1	154.2800 W	154.2800 W	None

### Shared Channel Infrastructure

The Mariposa OA recognizes that fire and law enforcement are able to communicate with each other using others radio frequencies as agencies operate on VHF. Local CHP are provided VHF radios from the Mariposa Sheriff's Department in order to communicate directly with the agency.

Mariposa Sheriff operates under a MOU with the Madera County Sheriff for use of Madera's gateway.

## **Mendocino County Operational Area**

### **24-Hour Facilities**

#### **Emergency Services Dispatch**

Telephone: (707) 463-4086

#### **CAL FIRE-Mendocino ECC**

This center is known by the following call sign: “**Willits**”

24/7 Telephone: (707) 459-5336

### **Regularly Monitored Channels**

No data currently available

### **Shared Channel Infrastructure**

No data currently available

**Merced County Operational Area****24-Hour Monitoring Facilities**

Merced County provides 24-hour monitoring of interoperability channels through its Countywide Coordinated Communications Center, staffed by the Merced County Sheriff's Department. This center is the point of contact for all city and county law enforcement, fire, lifeguard, and public works departments throughout the Merced County OA.

The Countywide Coordinated Communications Center is known by the following call signs: **"Merced County"** or **"Control One"**  
Telephone: (209) 385-7444

**CAL FIRE-Madera-Mariposa-Merced ECC**

This center is known by the following call sign: **"Mariposa"**  
24/7 Telephone: (209) 966-3621

**Regularly Monitored Channels**

VHF High				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Law	CLEMARS 1	154.9200 W	154.9200 W	None

800 MHz				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Calling	I-CALL	866.0125 W	821.0125 W	156.7
Law	CLEMARS 9	868.5125 W	823.5125 W	156.7
Fire/EMS	FIREMARS	868.9875 W	823.9875 W	156.7

**Shared Channel Infrastructure**

The Merced County Sheriff's Department maintains a console based gateway at its Countywide Coordinated Communications Center. This gateway can patch any of the channels listed above to any County of Merced 800 MHz Countywide Coordinated Communications System talkgroup or channel.

## **Modoc County Operational Area**

### **24-Hour Facilities**

#### **Emergency Operations Center**

Telephone: (530) 233-4416

#### **Susanville Interagency Fire Center**

This center is known by the following call sign: "**Susanville**"

Telephone: (530) 257-5575

### **Regularly Monitored Channels**

No data currently available

### **Shared Channel Infrastructure**

No data currently available

**Mono County Operational Area****24-Hour Monitoring Facilities**

The County of Mono provides 24-hour monitoring of interoperability channels through the Mono County Sheriff's Dispatch Center, staffed by the Mono County Sheriff's Department. This center is the point of contact for all city and county law enforcement, fire, EMS, and public works departments throughout the Mono County OA. The Dispatch Center is located at 100 Bryant Street, Bridgeport, CA.

This center is known by the following call sign: **"Mono 1"**  
Telephone: (760) 932-7549

**Regularly Monitored Channels**

VHF High				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Law	CLEMARS 1	154.9200 W	154.9200 W	None

**Shared Channel Infrastructure**

No data currently available

## **Monterey County Operational Area**

### **24-Hour Facilities**

#### **Emergency Services Director**

Telephone: (831) 755-5010

#### **Emergency Services Manager**

Telephone: (831) 795-1900

#### **CAL FIRE-San Benito-Monterey ECC**

This center is known by the following call sign: **"Monterey"**

24/7 Telephone: (831) 647-6222

### **Regularly Monitored Channels**

No data currently available

### **Shared Channel Infrastructure**

No data currently available

**Napa County Operational Area****24-Hour Monitoring Facilities**

Napa County has two 24-hour communications centers.

Napa Dispatch answers all 9-1-1 calls for the County unincorporated area, City of Napa, City of American Canyon, and Town of Yountville. Napa Dispatch is responsible for all public safety communications within the City of Napa borders, along with Sheriff and Medical dispatching countywide. Napa Dispatch is manned by City of Napa employees.

Napa Dispatch is known by the following call sign: **"NAPA"**  
24-hour Telephone: (707) 257-9223

St. Helena Emergency Communication Center (ECC) provides all fire dispatching within the County of Napa, except for the City of Napa (which is handled by Napa Dispatch). St. Helena ECC is a joint Napa County/CalFire dispatch center manned by CalFire employees.

The St. Helena ECC is known by the following generic call sign: **"ST.HELENA"**.

24-hour Telephone: (707) 963-9636

**Regularly Monitored Channels**

VHF High Napa Dispatch				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Law	CLEMARS 1	154.9200 W	154.9200 W	None

VHF High St. Helena ECC				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Fire	WHITE 1	154.2800 W	154.2800 W	None

**Napa County Operational Area (con't)**

**Shared Channel Infrastructure**

Napa County uses local frequencies that are shared with all law enforcement and fire agencies within the county borders.

Napa Dispatch				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Law	Primary	155.4300 W	158.9700 W	131.8 Tx
Law Secondary	Red	151.0700 W	159.0450 W	192.8 Tx

"St. Helena ECC"				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Cal Fire	LNU EAST	151.3400 W	159.3150 W	136.5 Tx
Cal Fire	LNU WEST	151.4600 W	159.3900 W	151.4 Tx
County Fire	County Fire	154.4150 W	154.8600 W	110.9 Tx

**Nevada County Operational Area**

**24-Hour Monitoring Facilities**

**Office of Emergency Services**

Telephone: (530) 265-7880

**Grass Valley Interagency Command Center**

This center is known by the following call sign: “**Grass Valley**”

24/7 Telephone: (530) 477-5761

**Regularly Monitored Channels**

No data currently available

**Shared Channel Infrastructure**

No data currently available

## Orange County Operational Area

### 24-Hour Monitoring Facilities

Orange County provides 24-hour monitoring of interoperability channels through its Countywide Coordinated Communications Center, staffed by the Orange County Sheriff's Department. This Center is the point of contact for all city and county law enforcement, fire, lifeguard and public works departments throughout the Orange County OA.

This center is known by the following call signs: **"Orange County"**, **"Control One"**, **"OCC"** or **"Orange County Communications"**

Telephone: (714) 628-7000

### Regularly Monitored Channels

VHF Low				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Law	CLEMARS 7	39.4600 W	45.8600 W	156.7

VHF High				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Law	CLEMARS 1	154.9200 W	154.9200 W	None
Law	NALEMARS	155.4750 W	150.7900 W	156.7
Fire	WHITE 1	154.2800 W	154.2800 W	None

UHF				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Law	CLEMARS 5	460.0250 W	465.0250 W	156.7

**Orange County Operational Area (con't)**

800 MHz				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Calling	I-CALL	866.0125 W	821.0125 W	156.7
Law	CLEMARS 9	868.5125 W	823.5125 W	156.7
Fire/EMS	FIREMARS	868.9875 W	823.9875 W	156.7

**Shared Channel Infrastructure**

The Orange County Sheriff's Department maintains a console-based gateway at its Countywide Coordinated Communications Center. This gateway can patch any of the channels listed above to any County of Orange 800 MHz Countywide Coordinated Communications System talkgroup or channel.

## Placer County Operational Area

### 24-Hour Monitoring Facilities

Placer County provides 24-hour monitoring of interoperability channels through its 9-1-1 Dispatch Center, staffed by the Placer County Sheriff's Department. This center is the point of contact for all law enforcement and fire in the unincorporated portions of the county.

This center is known by the following call signs: **"Placer County"**  
**"Placer"** or **"Placer County Communications"**

Telephone: (530) 886-5375

### Regularly Monitored Channels

VHF High				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Law	CLEMARS 1	154.9200 W	154.9200 W	None
Fire	WHITE-1	154.2800 W	154.2800 W	None

### Shared Channel Infrastructure

The Placer County Sheriff's Department maintains a console-based patching system at its Communications Center. This patching system has the ability to patch any of the channels listed above to any regularly used law enforcement or fire channels in Placer County.

**Plumas County Operational Area****24-Hour Monitoring Facilities**

Plumas County provides 24-hour monitoring of interoperability channels through its Countywide Coordinated Communications Center, staffed by the Plumas County Sheriff's Department. This center is the point of contact for all city and county law enforcement, fire and public works departments throughout the Plumas County OA.

This center is known by the following call signs: "**Control One**" or "**Fire Control**"

Telephone: (530) 283-6300

**Regularly Monitored Channels**

VHF High				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Law	CLEMARS 1	154.9200 W	154.9200 W	None

**Shared Channel Infrastructure**

The Plumas County Sheriff's Department maintains a console-based gateway at its Countywide Coordinated Communications Center. This gateway can patch any of the channels listed above to any County of Plumas VHF high- or low-band Countywide Coordinated Communications System repeater or base station.

## **Riverside County Operational Area - FIRE**

### **24-Hour Monitoring Facilities**

Riverside County Fire (RVC FIRE)/CALFIRE Perris Emergency Communications Center (ECC) provides 24-hour monitoring of interoperability channels through its Emergency Communications Center, staffed by the Riverside County Fire Department and/or CALFIRE personnel. This center is the point of contact for all State/County Fire Response Areas within the Riverside County OA. The Perris ECC is also the point of contact for the following cities that contract with Riverside County Fire for fire protection services: Banning, Beaumont, Calimesa, Canyon Lake, Coachella, Desert Hot Springs, Indian Wells, Indio, Lake Elsinore, La Quinta, Menifee, Moreno Valley, Palm Desert, Perris, Rancho Mirage, San Jacinto, Temecula, and Wildomar. The Perris ECC also provides dispatching services and is the point of contact for the following Fire Protection District and Tribal Fire Departments: Idyllwild Fire Protection District, Morongo Fire Department, and Pechanga Fire Department.

This center is known by the following call signs: **"Perris"** (Primary), **"Riverside"** (Alternate ECC), **"Indio"** (Alternate ECC)

#### **Perris Emergency Communications Center**

Telephone: (800) 253-6900

Telephone: (951) 940-6948

Satellite Phone: (888) 251-8483

#### **Riverside Alternate ECC**

Telephone: (951) 955-4792

#### **Indio Alternate ECC**

Telephone: (760) 775-7827

## Riverside County Operational Area FIRE (con't)

Regularly Monitored Channels

VHF High				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Fire	WHITE-1	154.2800 W	154.2800 W	None

800 MHz				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Fire/EMS	FIREMARS	868.9875 W	823.9875 W	156.7

Shared Channel Infrastructure

VHF Low				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Western County Disaster Net West River County	W.C.D.N.	33.9200 W	33.5000 W	167.9 Rx 110.9, 123.0 Tx

VHF High				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Fire	Cal EMA FIRE 1B	154.1600 W	159.1950 W	None
Fire	Cal EMA FIRE 2B	154.2200 W	159.1950 W	None
Fire – MA West County	WHITE-1 Aka VFIRE21	154.2800 W	154.2800 W	None
Fire – MA Coachella Valley	WHITE-1 Aka VFIRE21	154.2800 W	154.2800 W	None
Coachella Valley Disaster Net	C.V.D.N.	155.1450 W	155.1450 W	None 167.9

**Riverside County Operational Area FIRE (con't)**

800 MHz				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Fire/EMS	FIREMARS	868.9875 W	823.9875 W	None 156.7
CMARS 800 CONV	CMARS	867.5375 W	822.5375 W	None 71.9

**Riverside County Operational Area – Law Enforcement****24-Hour Monitoring Facilities**

The County of Riverside, by way of the Riverside Sheriff's Department, provides 24-hour monitoring of interoperability channels through its Communications Centers.

**Riverside Sheriff's Communications Center – Riverside**

7195 Alessandro Blvd.

Riverside, CA 92506

Telephone: (951) 955-2526 (Office, M-F, 9 a.m. - 5:00 p.m.)

Telephone: (951) 776-1010 (24-hour Comm Supervisor)

**Riverside Sheriff's Communications Center – Palm Desert**

73520 Fred Waring Dr.

Palm Desert, CA 92260

Telephone: (760) 836-1769 (24-hour local office)

Telephone: (951) 776-1020 (24-hour Comm Supervisor)

**Riverside Sheriff's Communications Center – Blythe**

Colorado River Station

260 N. Spring St.

Blythe, CA 92225

Telephone: (760) 921-7900 (24-hour local office)

Telephone: (760) 921-5763 (Comm Supervisor)

**Regularly Monitored Channels**

VHF High				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Law	CLEMARS 1	154.9200 W	154.9200 W	None

UHF				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Law	CLEMARS 5	460.0250 W	465.0250 W	131.8

**Riverside County Operational Area Law Enforcement (con't)**

800 MHz				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Calling	I-CALL	866.0125 W	821.0125 W	156.7
Law	CLEMARS 9	868.5125 W	823.5125 W	156.7
Law	I-TAC 1	866.5125 W	821.5125 W	156.7
Law	I-TAC 2	867.0125 W	822.0125 W	156.7
Law	I-TAC 3	867.5125 W	822.5125 W	156.7
Law	I-TAC 4	868.0125 W	823.0125 W	156.7
Fire/EMS	FIREMARS	868.9875 W	823.9875 W	156.7

**Shared Channel Infrastructure**

The Riverside Sheriff's Department has installed its EDACS radio equipment at every municipal law enforcement communications center in the county and at several outside of the county for interoperable communications. These radios are linked to local emergency dispatch consoles for ease of access and patching purposes. Routine (twice daily) patch tests are conducted with cities that do not contract for services with the Sheriff's department to ensure emergency dispatchers are aware of the capabilities of mutual aid communications methods, and to ensure the equipment is functioning properly.

Any of the allied agencies can be patched to any talk group in the Riverside Sheriff's Department's 800 MHz system. Each has its own dedicated talk group (or in some cases, paired talk groups).

Riverside County and CalFire have established a county-wide dispatch-to-dispatch microwave circuit, which interoperates with all allied agencies within the county (with the exception of the City of Blythe). Included are the communications centers for the County Fire Department, CHP Indio, and the Indio City, Cathedral City, Palm Springs, Desert Hot Springs, Banning, Beaumont, Hemet, Murrieta, Corona, and both the City and County of Riverside.

**Sacramento County Operational Area****24-Hour Monitoring Facilities**

The Sacramento Regional Radio Communications System (SRRCS) is the provider of radio communications to all local public safety agencies (law enforcement, fire and EMS) within Sacramento County, as well as the City of West Sacramento (Yolo County). The County of Sacramento, through the SRRCS, provides 24-hour monitoring of the I-CALL (8CALL90) 800 MHz channel at the County Communications Center. Emergency requests through this channel will cause the County Communications Center to notify the appropriate local public safety agency dispatch center to bring up the channel at its location to appropriately resolve the situation. If necessary, the County Communications Center, the Sheriff's Dispatch Center and the Sacramento Police Dispatch Center all have the capability to bring up any of the eight interoperable channels listed in the 800 MHz table below. The repeaters for these channels are distributed throughout the Sacramento region at SRRCS radio sites.

This center is known by the following call signs: **"Sac County Dispatch"** or **"Sacramento Communications Center"**  
24/7 Telephone: (916) 875-6900

**Sacramento County Operational Area (con't)**

**Regularly Monitored Channels**

800 MHz				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Calling	I-CALL <sup>1</sup>	866.0125 W	821.0125 W	156.7
Public Safety	I-TAC 1	866.5125 W	821.5125 W	156.7
Public Safety	I-TAC 2	867.0127 W	822.0125 W	156.7
Public Safety	I-TAC 3	867.5125 W	822.5125 W	156.7
Public Safety	I-TAC 4	868.0125 W	823.0125 W	156.7
Law (Statewide)	CLEMARS 9	868.5125 W	823.5125 W	156.7
Law Northern CA	CLEMARS 21	866.2000 W	821.2000 W	156.7
Fire/EMS (Statewide)	FIREMARS 1	868.9875 W	823.9875 W	156.7
Fire/EMS (Northern CA)	FIREMARS 2	866.9125 W	821.9125 W	156.7
<sup>1</sup> I-CALL is the only regularly monitored channel. However, the other channels may be brought up for use.				

**Shared Channel Infrastructure**

Caltrans' Sunrise region is part of the SRRCS. Field staff from the Sunrise region cover the Sacramento, Sutter, Yolo, Placer and El Dorado counties.

Law enforcement, fire and EMS mobile and portable radios within the SRRCS are programmed with the appropriate 800 MHz mutual aid channels and can communicate on a channel when the repeater is active. In addition, there is a low-band CLEMARS 7 (LLAW1) gateway repeater that can be activated for interoperable communications with the California Highway Patrol.

The CLEMARS 7 repeater is assigned to an SRRCS talk group and can be console-patched to the appropriate public safety talk group.

VHF Low				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
LAW	CLEMARS 7	39.4600 W	45.8600 W	156.7

**San Benito County Operational Area**

**24-Hour Facilities**

**Emergency Services Dispatch**

Telephone: (831) 636-4100

**CAL FIRE-San Benito-Monterey ECC**

This center is known by the following call sign: **"Monterey"**

24/7 Telephone: (831) 647-6222

**Regularly Monitored Channels**

No data currently available

**Shared Channel Infrastructure**

No data currently available

## **San Bernardino County Operational Area**

### **24-Hour Facilities**

#### **Emergency Operations Center**

Telephone: (909) 356-3805

#### **San Bernardino County Fire Communications Center**

Telephone: (909) 822-8072

Telephone: 1-800-340-9110

Telephone: 1-800-472-2376

#### **CAL FIRE-San Bernardino ECC**

This center is known by the following call sign: “**San Bernardino**”

24/7 Telephone: (909) 883-1112

#### **San Bernardino County Sheriff Department**

Telephone: (760) 243-8904 (Desert Areas)

Telephone: (909) 356-3850 (Valley and Mountains Area)

### **Regularly Monitored Channels**

VHF High				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Fire	WHITE 1	154.2800 W	154.2800 W	None
Law	CLEMARS 1	154.9200 W	154.9200 W	None

800 MHz				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Law	CLEMARS 8	868.5125	868.5125	156.7

### **Shared Channel Infrastructure**

No data currently available

**San Diego County Operational Area****24-Hour Facilities****Office of Emergency Services**

Telephone (non-business hours): (858) 565-3490

**San Diego County Sheriff's Communications Center  
Supervisor**

Telephone: (858) 565-5030

**CAL FIRE-Monte Vista ECC**This center is known by the following call sign: **"Monte Vista"**

24/7 Telephone: (619) 593-0384

**Regularly Monitored Channels**

800 MHz				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Law	CLEMARS 9 <sup>1</sup>	868.5125 W	823.5125 W	156.7
Call	ICALL <sup>1</sup>	866.0125 W	821.0125 W	156.7
<sup>1</sup> Monitored by the San Diego County Sheriff's Department				

**Shared Channel Infrastructure**

The San Diego Regional Communications System (SDRCS) provides a shared, multi-agency (State, Local and Federal agencies) interoperable communications system. For more information, please visit <https://www.rcs800mhz.org>.

## San Francisco County Operational Area

### 24-Hour Facilities

#### San Francisco PSAP, Dispatch Supervisor Line

24/4 Telephone: 415-575-0737 (Police) and 415-558-3291 (Fire)

### Mutual Aid Repeaters

VHF High				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Fire	WHITE 1	154.2800 W	154.2800 W	None

800 MHz				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Law	CLEMARS 9	868.5125 N	823.5125 N	156.7
Law	CLEMARS 21	866.2000 N	821.2000 N	156.7
Fire/EMS	FIREMARS 1	868.9875 N	823.9875 N	156.7
Fire/EMS	FIREMARS 2	866.9125 N	821.9125 N	156.7
Calling	I-CALL/8CALL90	866.0125 N	821.0125 N	156.7
Public Safety	I-TAC 1/8TAC91	866.5125 N	821.5125 N	156.7
Public Safety	I-TAC 2/8TAC92	867.0127 N	822.0125 N	156.7
Public Safety	I-TAC 3/8TAC93	867.5125 N	822.5125 N	156.7
Public Safety	I-TAC 4/8TAC94	868.0125 N	823.0125 N	156.7

**San Joaquin County Operational Area – Sheriff****24-Hour Monitoring Facilities****San Joaquin County Sheriff's Department  
Communications Center**

Telephone: (209) 468-5517 or (209) 468-4400

**Regularly Monitored Channels**

The San Joaquin County Sheriff's Department does not routinely monitor any national or state interoperability channels.

**Shared Channel Infrastructure**

The San Joaquin County Sheriff's Department maintains a non-staffed Mobile Communications Vehicle (MLEC) available for call outs with a one-hour lead time. Based at Rough and Ready Island in Stockton, it is equipped with three UHF, two VHF, one low band, and one 800 MHz radios. This system gateway can patch the channels listed on San Joaquin County's frequency list.

**San Joaquin County Operational Area – City of Lodi****24-Hour Monitoring Facilities**

The City of Lodi provides 24-hour monitoring of interoperability channels through the City of Lodi Public Safety Communications Center. This center is staffed by the Lodi Police Department and is the main point of contact for the City of Lodi Police and Fire Departments.

The center is known by the following call signs: **"Lodi Fire"**; **"Lodi Police"**; or **"Lodi Police Dispatch"**

24-hour non-emergency telephone: (209) 333-6727

**Regularly Monitored Channels**

The City of Lodi Public Safety Communications Center does not commonly monitor the national or state interoperability channels; notification comes through the San Joaquin Office of Emergency Services (OES) system.

#### **San Joaquin County Operational Area (con't)**

##### **Shared Channel Infrastructure**

The City of Lodi Public Safety Communications Center has the capability of utilizing a channel from the San Joaquin County Sheriffs office, labeled as "SJCO Interop" along with the CLEMARS channel. These are not actively monitored.

The City of Lodi maintains a mobile communication unit that has the capability of broadcasting on VHF Low Band, UHF and 800 MHz systems. This unit also maintains a gateway that can patch to any of the pre-programmed channels in the frequency bands listed above.

#### **San Joaquin County Operational Area – City of Tracy**

##### **24-Hour Monitoring Facilities**

The City of Tracy provides 24-hour monitoring of interoperability channels, and is staffed by City of Tracy employees. The center is the point of contact for city law enforcement, public works and EMS calls.

This center is known by the following calls signs: "Tracy"; "Tracy Dispatch"; or "Tracy PD"

##### **Citywide Coordinated Communications Center:**

Telephone: (209) 831-4552

##### **Regularly Monitored Channels**

No data currently available

##### **Shared Channel Infrastructure**

The City of Tracy does not currently have a gateway system in the 24-hour Public Safety Answering Point (PSAP).

#### **San Joaquin County Operational Area – City of Ripon**

##### **24-Hour Monitoring Facilities**

The Ripon Police Department provides 24-hour monitoring of interoperability channels through its communications center, which is staffed by the Ripon Police Department. This center is the point of contact for all Ripon Police Department sworn and non-sworn staff.

This center is known by the following call sign: "Ripon"

**San Joaquin County Operational Area (con't)****Ripon Police Department Communications Center:**

Telephone: (209) 599-2102

**Regularly Monitored Channels**

UHF				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
San Joaquin Co. Sheriff Interop.	SJSO 1	460.1250 W	465.1250 W	N/A
San Joaquin Fire Dispatch	Stockton FD 1	460.6250 W	465.6250 W	N/A
Manteca PD Channel 1	MTCA PD 1	453.2000 W	458.2000 W	N/A

**Shared Channel Infrastructure**

The Ripon Police Department maintains a console-based gateway at its Countywide Coordinated Communications Center. This gateway can patch any of the channels listed above to any Ripon Police Department 450 MHz radio channel.

**San Joaquin County Operational Area – Joint Radio User Group****24-Hour Monitoring Facilities**

The San Joaquin County Joint Radio Users Group (SJCJRUG) is comprised of the 15 Fire Districts located in San Joaquin County plus one private ambulance provider (Manteca District Ambulance Service). The Group is contracted with American Medical Response and is dispatched through its 24-hour LifeCom Fire and EMS Dispatch Center located in Salida, CA.

The main Fire Dispatch channels are known by the following call signs: “**Control 1**”; or “**Control 2**”

**San Joaquin County Operational Area (con't)**

**Regularly Monitored Channels**

LifeCom Fire and EMS Dispatch Center only regularly monitors primary dispatch channels. The channels listed can be monitored and can be patched through the Center, although these are tactical simplex channels. All channels used for interoperability are used by field units only. Communication with the Dispatch Center is accomplished through repeated Dispatch and Command channels.

VHF High				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Fire	WHITE-1	154.2800 W	154.2800 W	None

**Shared Channel Infrastructure**

No data currently available

**San Luis Obispo County Operational Area****24-Hour Monitoring Facilities**

San Luis Obispo County operates two 24-hour emergency dispatch centers.

**Law Enforcement (Sheriff)**

The Sheriff PSAP located in San Luis Obispo, dispatches all law enforcement calls for unincorporated areas. They also dispatch all ambulance units within the county.

This center is known by the following call sign: **"Control 20"**  
24/7 Telephone: (805) 781-4550

**CAL FIRE-County Fire San Luis Obispo ECC**

The Fire Dispatch center located in San Luis Obispo, dispatches fire and medical related calls for unincorporated areas and some cities under contract.

This center is known by the following call sign: **"San Luis"**  
24/7 Telephone: (805) 543-4242

**Regularly Monitored Channels**

VHF High				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Fire	WHITE-1	154.2800 W	154.2800 W	None
Fire	County Fire Net	154.3850 W	156.0300 W	82.5/82.5
Fire	SLU <sup>1</sup>	151.3250 W	159.3150 W	Multi <sup>1</sup>
<sup>1</sup> SLU (San Luis Ranger Unit) local net operates on tones 10, 11, 12, 13 (see page 5-1) depending on mobile location				

**San Luis Obispo County Operational Area (con't)**

UHF				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Law	CLEMARS 5	460.0250 W	465.0250 W	None/156.7
Law	Sheriff Red <sup>1</sup>	460.0500 W	465.0500 W	123.0/82.5
Law	Sheriff Yellow <sup>1</sup>	460.4750 W	465.4750 W	123.0/82.5
EMS	MED 1 <sup>2</sup>	463.0000 W	468.0000 W	88.5/88.5
<sup>1</sup> Sheriff Red & Yellow is monitored by all seven city police agencies within San Luis Obispo County and Cal Poly State University Police. CHP monitors Red channel.				
<sup>2</sup> Med 1 used for county wide ambulance dispatch				

**Shared Channel Infrastructure**

VHF High				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Fire	CALCORD	156.0750 W	156.0750 W	None

UHF				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Law	CLEMARS 4	460.0250 W	460.0250 W	None/156.7

San Luis Obispo County Communications operates a "Mobile Interoperability Gateway Unit" known as MIGU 5. This unit is provided by Cal-EMA. The mobile unit incorporates radios covering from 2-30 MHz HF & 30-800 MHz VHF/UHF; controlled via two JPS ACU-1000 switches. An OASIS Satellite Earth Station provides 12 phone connections and internet access.

**Other resources:****County Office of Emergency Services**

Telephone (business hours): (805) 781-5011

Telephone (On Call Duty coordinator): (805) 781-1144

**San Mateo County Operational Area**

**24-Hour Facilities**

**Operational Area Coordinator**

Telephone: (650) 363-4915

**CAL FIRE-San Mateo-Santa Cruz ECC**

This center is known by the following call sign: “**Felton**”

24/7 Telephone: (831) 335-9113

**Regularly Monitored Channels**

No data currently available

**Shared Channel Infrastructure**

No data currently available

## **Santa Barbara County Operational Area**

### **24-Hour Monitoring Facilities**

#### **Law/Fire/EMS (Sheriff)**

24/7 Telephone: (805) 683-2724

### **Regularly Monitored Channels**

VHF High				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Law	CLEMARS 1	154.9200 W	154.9200 W	None
Fire	WHITE 1	154.2800 W	154.2800 W	None

UHF				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Law	CLEMARS 5	460.0250 W	465.0250 W	None

### **Shared Channel Infrastructure**

Swap (cache) Radios			
Jurisdiction	Agency	Units	Description
Santa Barbara County	General Services	45	UHF portable radios programmed to the Sheriff's profile.

Shared Channels				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Law	SB PD	465.100	460.100	82.5/82.5
Fire	Lompoc PD	465.125	460.125	97.4/97.4
Law	Red (SLO/SBC Mutual Aid)	465.050	460.050	82.5/82.5

**Santa Barbara County Operational Area (cont'd)**

Gateways				
Jurisdiction	Agency	Type	Quantity	Fixed Mobile
Santa Barbara County	General Services	ACU 1000	3	Mobile

Shared Systems			
Name	Service Area	Radio System	Public Safety Agencies Supported
SBC	Countywide	UHF/VHF simulcast	SBC Sheriff's Dept./SBC Fire Dept./EMS
SBC	Countywide	Microwave backbone	See above

## **Santa Clara County Operational Area**

### **24-Hour Facilities**

#### **Office of Emergency Services**

Telephone: (408) 299-2501

#### **CAL FIRE-Santa Clara ECC**

This center is known by the following call sign: **“Morgan Hill”**

24/7 Telephone: (408) 779-4111

### **Regularly Monitored Channels**

No data currently available

### **Shared Channel Infrastructure**

No data currently available

**Santa Cruz County Operational Area**

**24-Hour Facilities**

**Emergency Operations Center Coordinator**

Telephone: (831) 471-1190

**CAL FIRE-San Mateo-Santa Cruz ECC**

This center is known by the following call sign: “**Felton**”

24/7 Telephone: (831) 335-9113

**Regularly Monitored Channels**

No data currently available

**Shared Channel Infrastructure**

No data currently available

## **Shasta County Operational Area**

### **24-Hour Facilities**

#### **Emergency Coordinator**

Telephone: (530) 245-6540

#### **Sheriff Department**

Telephone: (530) 245-6000

#### **CAL FIRE-Shasta-Trinity ECC**

This center is known by the following call sign: “**Shasta**”

24/7 Telephone: (530) 243-1434

### **Regularly Monitored Channels**

No data currently available

### **Shared Channel Infrastructure**

No data currently available

**Sierra County Operational Area**

**24-Hour Monitoring Facilities**

**Office of Emergency Services (OES)**

Telephone: (530) 289-3700 or (530) 289-3333

**Regularly Monitored Channels**

No data currently available

**Shared Channel Infrastructure**

No data currently available

## **Siskiyou County Operational Area**

### **24-Hour Facilities**

#### **Emergency Operations Center**

Telephone: (530) 841-2900

#### **Sheriff**

Telephone: (530) 841-2900

#### **CAL FIRE-Siskiyou ECC**

This center is known by the following call Sign: “Yreka”

24/7 telephone: (530) 842-3515

### **Regularly Monitored Channels**

No data currently available

### **Shared Channel Infrastructure**

No data currently available

**Solano County Operational Area****24-Hour Facilities****Emergency Services**

Telephone: (707) 421-7090

**Regularly Monitored Channels**

VHF High				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Law	CLEMARS 1	154.9200 W	154.9200 W	None
Fire	WHITE 1	154.2800 W	154.2800 W	None

**Shared Channel Infrastructure**

No data currently available

## **Sonoma County Operational Area**

### **24-Hour Monitoring Facilities**

Sonoma County provides 24-hour monitoring of interoperability channels through its Redwood Empire Dispatch Communications Authority (REDCOM) and Sheriff's Department Communications Centers. REDCOM is the point of contact for fire and EMS departments throughout the Sonoma County OA. The Sonoma County Sheriff's Department is the point of contact for all city and county law enforcement throughout the Sonoma County Operational Area.

REDCOM is known by the following call sign: "**REDCOM**"

Telephone: (707) 568-5933

### **CAL FIRE-Sonoma-Lake-Napa ECC**

This center is known by the following call sign: "**St. Helena**"

24/7 Telephone: (707) 963-9636

### **Regularly Monitored Channels**

VHF High				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Fire	WHITE 1	154.2800 W	154.2800 W	None

### **Shared Channel Infrastructure**

None

**Stanislaus County Operational Area****24-Hour Monitoring Facilities**

Stanislaus County monitors the channels listed below through Stanislaus Regional 9-1-1 (SR911) - a consolidated law enforcement/fire dispatch center and primary PSAP. Where possible, the county has provided primary channels that are constantly monitored. Other channels are monitored as staffing and activity levels allow.

The center (SR911) is known by the following call signs, but recommends communication via cellular telephone when possible:

- “**Modesto**” on UHF
- “**Control 1**” on VHF law enforcement
- “**Stanislaus Fire Command**” on VHF fire channels

Emergency Telephone: (209) 558-4357

Non-Emergency Telephone: (209) 552-3911

**Regularly Monitored Channels**

VHF High				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Sheriff Channel 3	SO CH 3	158.8650 W	155.7450 W	103.5
Fire Command	Command 3	151.0100 W	153.8750 W	D-343

UHF				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
CLEMARS 5	MPD CH 3	460.0250 W	465.0250 W	173.8

**Shared Channel Infrastructure**

SR911 has a console-based gateway at its Countywide Coordinated Communications Center. This gateway can patch channels which currently exist on the center's console.

## **Sutter County Operational Area**

### **24-Hour Monitoring Facilities**

#### **Sutter County Dispatch**

Sutter County provides 24-hour monitoring of interoperability and mutual aid channels through its communications center located at and staffed by the Sutter County Sheriff's Department. This center is the point of contact for all county law enforcement, fire, emergency services, and public works throughout the Sutter County OA.

Call Sign: "**Sutter County**"

24/7 Telephone: (530) 822-7307

Fax: (530) 822-7318

OASIS: 3-6201

CLETS Mnemonic: YCS0

NLETS ORI: CA0510000

Mobile Command Post Main Tellular: 1-530-218-9093

Mobile Command Post Sat Phone: 1-800-337-5151

#### **Yuba City Dispatch**

Yuba City is an incorporated city within the Sutter County OA.

Yuba City provides 24-hour monitoring of interoperability and mutual aid channels through its communications center located at and staffed by the Yuba City Police Department. This center is the point of contact for all city law enforcement, fire, emergency services, and public works within the incorporated areas of the city.

Call signs: "**Yuba City**" or "**City Dispatch**"

24/7 Telephone: (530) 822-4661

Fax: (530) 822-4799

"Situation Room" Sat Phone: 1-877-884-0957

CLETS Mnemonic: YCM0

**NLETS ORI: CA0510200**

**Sutter County Operational Area (con't)****Regularly Monitored Channels****Sutter Operational Area - Sutter County Dispatch**

VHF High				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
LAW	CLEMARS 1	154.9200 N	154.9200 N	None
FIRE	WHITE 1 <sup>1</sup>	154.2800 W	154.2800 W	None
Tactical	CALCORD <sup>1</sup>	156.0750 W	None	None
Tactical	VCALL <sup>1</sup>	155.7525 N	155.7525 N	156.7
Tactical	VTAC11 <sup>1</sup>	151.1375 N	151.1375 N	156.7
Tactical	VTAC12 <sup>1</sup>	154.4525 N	154.4525 N	156.7
<sup>1</sup> These channels are not always enabled. They are included in a multi-frequency radio and must be "selected" to enable the channel.				

UHF				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
LAW	CLERS 7	453.8750 W	458.8750 W	110.9
LAW	CLEMARS 4	460.0250 W	460.0250 W	156.7
LAW	CLEMARS 5	460.0250 W	465.0250 W	156.7
EMS	MED 9	462.9500 W	467.9500 W	210.7
Calling	UCALL40 D <sup>1</sup>	453.2125 N	453.2125 N	156.7
Tactical	UTAC41 <sup>1</sup>	453.4625 N	458.4625 N	156.7
Tactical	UTAC41D <sup>1</sup>	453.4625 N	453.4625 N	156.7
Tactical	UTAC42D <sup>1</sup>	453.7125 N	453.7125 N	156.7
Tactical	UTAC43D <sup>1</sup>	453.8625 N	453.8625 N	156.7
<sup>1</sup> These channels are not always enabled. They are included in a multi-frequency radio and must be "selected" to enable the channel.				

**Sutter County Operational Area (con't)**

**Regularly Monitored Channels**

**Sutter Operational Area - Yuba City Dispatch**

VHF Low				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
LAW	CLEMARS 7 <sup>1</sup>	39.4600 W	45.8600 W	156.7
<sup>1</sup> Channel normally "disabled". Must be "enabled" by request. Activating this channel enables a high-level repeater on the Sutter Buttes. This resource can also be temporarily tied into a fixed gateway cross-connect system.				

VHF High				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
LAW	CLEMARS 1	154.9200 N	154.9200 N	NONE
FIRE	WHITE 1	154.2800 W	154.2800 W	NONE
Tactical	VTAC11 <sup>1</sup>	151.1375 N	151.1375 N	156.7
<sup>1</sup> Channel normally "disabled". Must be "enabled" by request. Activating this channel enables a high-level remote base on the Sutter Buttes. This resource can also be temporarily tied into a fixed gateway cross-connect system.				

UHF				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
LAW	CLERS 7	453.8750 W	458.8750 W	110.9
LAW	CLEMARS 4	460.0250 W	460.0250 W	NONE
LAW	CLEMARS 5 <sup>1</sup>	460.0250 W	465.0250 W	156.7
Tactical	UTAC41 <sup>2</sup>	453.4625 N	458.4625 N	156.7
<sup>1</sup> This repeater is normally "enabled" but can be "disabled" by request. This repeater can also be temporarily tied into a fixed gateway cross-connect system upon request. <sup>2</sup> Channel normally "disabled". Must be "enabled" by request. Activating this channel enables a high-level repeater on the Sutter Buttes. This resource can also be temporarily tied into a fixed gateway cross-connect system.				

**Sutter County Operational Area (con't)**

800 MHz				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
LAW	CLEMARS 9 <sup>1</sup>	868.5125 W	823.5125 W	156.7
Tactical	ITAC 1 <sup>1</sup>	866.5125 W	821.5125 W	156.7
<sup>1</sup> This repeater is normally "disabled". Must be "enabled" by request. "Enabling" activates a high-level repeater on the Sutter Buttes. This resource can also be temporarily tied into a fixed gateway cross-connect system.				

**Shared Channel Infrastructure****Shared Channels:**

In addition to local agency shared conventional channel plans, Sutter County Operational Area law enforcement (UHF) and fire (VHF) radios are programmed to include standard statewide and national interoperability channels and are using common CALSIEC/NPSTC designators as defined in this IFOG.

**Gateway Infrastructure:**

The **Sutter County Sheriff's Department** maintains a mobile command vehicle with a Raytheon JPS TRP-1000 gateway. This gateway device can cross-connect multiple VHF high-band, VHF low-band, UHF, and 700/800 MHz radios. These radios contain all local, state, national and federal interoperability channels as well as many surrounding OA local frequencies.

The **Yuba City Police Communications Center** maintains a Raytheon JPS ACU-2000 IP gateway device. This fixed gateway is co-located with several mutual aid and interoperability repeaters and remote base stations. This gateway is configured as a hard-wired, cross-connect controller between the frequencies specified above and can be enabled and disabled from the Yuba City Police Department Communications Center as well as remotely controlled in the field over the air using Dual-Tone Multi-Frequency (DTMF) commands. This gateway is located on top of the Sutter Buttes mountain range and provides regional communications and interoperability capabilities. The repeaters and remote base stations interfaced with this device will also operate as stand-alone resources independent of any cross-connect capabilities.

## **Tehama County Operational Area**

### **24-Hour Monitoring Facilities**

Telephone: (530) 529-7905 (Non-public direct line to dispatch)

Telephone: (530) 529-7900 (Ext. 1 for dispatch)

### **CAL FIRE-Tehama-Glenn ECC**

This center is known by the following call sign: “**Red Bluff**”

24/7 Telephone: (530) 527-2241

### **Regularly Monitored Channels**

VHF High				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Law	CLEMARS 1	154.9200 W	154.9200 W	None

### **Shared Channel Infrastructure**

No data currently available

**Trinity County Operational Area**

**24-Hour Facilities**

**Emergency Services Coordinator**

Telephone: (530) 623-8127

**Office of Emergency Services (OES) Director/Sheriff**

Telephone: (530) 623-2611

**CAL FIRE-Shasta-Trinity ECC**

This center is known by the following call sign: **"Shasta"**

24/7 Telephone: (530) 243-1434

**Regularly Monitored Channels**

No data currently available

**Shared Channel Infrastructure**

No data currently available

## Tulare County Operational Area

### 24-Hour Monitoring Facilities

Tulare County operates four local 24-hour emergency sheriff dispatch radio channels, and two local 24-hour fire emergency dispatch radio channels. The sheriff's dispatch is centrally located in the city of Visalia, and in the sheriff's headquarters/main jail facility. It operates voice radio countywide on all Sheriff channels.

The sheriff's dispatch is known by the following call sign: **"Visalia"**  
Telephone: (559) 733-6218

The fire dispatch, located in southern Visalia City, is also a 24-hour countywide communications center, and has two local radio channels, as mentioned above.

The fire dispatch is known by the following call sign: **"Firecomm"**  
Telephone: (559) 733-6544

### **CAL FIRE-Tulare ECC**

This center is known by the following call sign: **"Tulare"**  
24/7 Telephone: (559) 734-7477

### Regularly Monitored Channels

VHF High				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Fire	WHITE 1	154.2800 W	154.2800 W	CSQ
Note: State White-Fire is only monitored by "Firecomm" on an as-needed basis, i.e. with prior phone or radio coordination.				

UHF				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Law	CLEMARS	460.0250 W	465.0250 W	131.8
Law	CLEMARS DIRECT	460.0250 W	460.0250 W	CSQ
Note: CLEMARS is only monitored by sheriff dispatch ("Visalia") on an as-needed basis, i.e. with prior phone or radio coordination.				

**Tulare County Operational Area (con't)****Shared Channel Infrastructure**

Tulare County operates under MOUs authorizing county public safety agencies to operate on all other agency's radio frequencies, including individual city agencies within the county. The county's 24-hour dispatch centers, "Firecomm" and "Visalia", maintain dispatch consoles to interface with an assortment of local radio channels/frequencies.

For contingency purposes, the county has the Unified Command Bus, a 'gateway switch' that can provide radio patching, and cell phone patching into radio networks.

## Tuolumne County Operational Area

### 24-Hour Facilities

#### **Emergency Coordinator**

Telephone: (209) 533-5815

#### **CAL FIRE-Tuolumne-Calaveras ECC**

This center is known by the following call sign: “**San Andreas**”

24/7 Telephone: (209) 754-1187

### Regularly Monitored Channels

Channels Monitored 24/7 at the Public Safety Answering Point (PSAP)

VHF Low				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Mutual Aid Tri County of Tuolumne		45.54	45.54	192.8

VHF High				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Law (Mutual Aid)	CLEMARS 1	154.9200 W	154.9200 W	CSQ
Law	Ch 1 West Sonora Peak	152.72 W	157.98 W	162.2/103.5
Law	Ch 1 Duckwall Mountain	152.72 W	157.98 W	162.2/179.9
Law	Ch 1 Moccassin Peak	152.72 W	157.98 W	162.2/203.5
Law	Ch 1 Strawberry Peak	152.72 W	157.98 W	162.2/173.3

VHF High				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Law	Ch 1 Double Dome	152.72 W	157.98 W	162.2/146.2
Law	Ch2 West Sonora Peak	152.63 W	157.89 W	162.2/103.5
Law	Ch 2 Duckwall Mountain	152.63 W	157.89 W	162.2/179.9
Law	Ch 2 Moccassin Peak	152.63 W	157.89 W	162.2/203.5

TAC 1 (154.785 c/c wide analog) is not monitored by the PSAP.

**Shared Channel Infrastructure**

No data currently available

## **Ventura County Operational Area**

### **24-Hour Monitoring Facilities**

#### **Law Enforcement (Sheriff)**

24/7 Telephone: (805) 654-9511

#### **County Fire/EMS**

24/7 Telephone: (805) 384-1500

### **Regularly Monitored Channels**

Fire/EMS regularly monitors the following channels:

VHF High				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Fire	WHITE 1	154.2800 W	154.2800 W	None
Cal Dept of Forestry	CDF Command-1	151.3550 W	159.3000 W	None/136.5

Law enforcement does not regularly monitor statewide channels.

### **Shared Channel Infrastructure**

All County-owned radios with more than 16 channel capability are required by policy to be programmed with the County-Wide SEMS Frequency Plan. This plan requires that 11 County-licensed frequencies for use in a catastrophic disaster, and one State frequency (CALCORD) be programmed into every radio. All County jurisdictions have been invited to participate in this program.

County of Ventura Standardized Emergency Management System (SEMS) Program					
Channel	Alias	Rx	Rx CTCSS	Tx	Tx CTCSS
SEMS 1	SO WEST	159.210	110.9	159.210	110.9
SEMS 2	SO EAST	156.150	123.0	156.150	123.0
SEMS 3	FIRE VNC	154.010	100.0	154.010	100.0
SEMS 4	CAR/CAR	158.730	100.0	158.730	100.0
SEMS 5	TACTICAL	155.535	114.8	155.535	114.8
SEMS 6	FIRE CMD1	154.325	100.0	154.325	100.0
SEMS 7	MEDNET	155.205	103.5	155.205	103.5
SEMS 8	SRCH/RES	155.160	CSQ	155.160	100.0
SEMS 9	CNTYWIDE	156.015	100.0	156.015	100.0
SEMS10	LG-3 STH	153.845	CSQ	158.940	100.0
SEMS11	PW STH	151.025	CSQ	156.240	141.3
SEMS12	CALCORD	156.075	CSQ	156.075	CSQ

The Ventura County Sheriff's Department and Ventura County Fire Department both maintain a console-based gateway at each individual Communications Center. This gateway can patch any of the Counties working channels to any other shared channels on a as needed basis.

## **Yolo County Operational Area**

### **24-Hour Monitoring Facilities**

#### **Emergency Operations Center**

Telephone: (530) 406-4977

24/7 Telephone: (530) 666-8920

Yolo County has three PSAPs. Yolo Emergency Communications Agency (YECA) has both VHF conventional and 800 MHz trunked radio frequencies, and Davis and the University of California at Davis (UCD) use 800 MHz frequencies.

This plan applies to YECA only.

### **Regularly Monitored Channels**

VHF High				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Law	CLEMARS 1	154.9200 W	154.9200 W	None
Law	NALEMARS	155.4750 W	155.4750 W	141.3

### **Shared Channel Infrastructure**

No data currently available

**Yuba County Operational Area****24-Hour Facilities****Office of Emergency Services**

Telephone: (530) 749-7777

**Fire Coordinator**

Telephone: (530) 743-1553

**Sheriff**

Telephone: (530) 749-7775

**Grass Valley Interagency Command Center**This center is known by the following call sign: “**Grass Valley**”

24/7 Telephone: (530) 477-5761

**Regularly Monitored Channels****Yuba County Dispatch Center**

VHF Low				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
FIRE	PSAP NET	46.1600 W	46.4600 W	Multi
This resource is used as a dispatch-to-dispatch channel between specified fire dispatch centers and surrounding agency ECC's in the event of a phone line failure.				

VHF High				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
LAW	CLEMARS 1	154.9200 N	154.9200 N	NONE
FIRE	WHITE 1 <sup>1</sup>	154.2800 W	154.2800 W	NONE
<sup>1</sup> This channel is not always enabled. It is included in a multi-frequency radio and must be “selected” to enable the channel.				

**Yuba County Operational Area (con't)**

UHF				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
LAW	CLERS 7	453.8750 W	458.8750 W	110.9
LAW	CLEMARS 4	460.0250 W	460.0250 W	None
LAW	CLEMARS 5 <sup>1</sup>	460.0250 W	465.0250 W	179.9 Tx / 156.7 Rx
EMS	MED 9 <sup>1</sup>	462.9500 W	467.9500 W	210.7
Calling	UCALL40 D <sup>1</sup>	453.2125 N	453.2125 N	156.7
Tactical	UTAC41 <sup>1</sup>	453.4625 N	458.4625 N	156.7
Tactical	UTAC41D <sup>1</sup>	453.4625 N	453.4625 N	156.7
<sup>1</sup> These channels are not always enabled. They are included in a multi-frequency radio and must be "selected" to enable the channel.				

**City of Marysville Dispatch Center**

VHF Low				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
FIRE	PSAP NET	46.1600 W	46.4600 W	Multi
This resource is used as a dispatch-to-dispatch channel between specified fire dispatch centers and surrounding agency ECC's in the event of a phone line failure.				

VHF High				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
LAW	CLEMARS 1	154.9200 N	154.9200 N	None
FIRE	WHITE 1 <sup>1</sup>	154.2800 W	154.2800 W	None
<sup>1</sup> This channel is not always enabled. It is included in a multi-frequency radio and must be "selected" to enable the channel.				

**Yuba County Operational Area (con't)**

UHF				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
LAW	CLERS 7	453.8750 W	458.8750 W	110.9
LAW	CLEMARS 4	460.0250 W	460.0250 W	None
LAW	CLEMARS 5	Control Station - Pending Construction		

**Shared Channel Infrastructure**

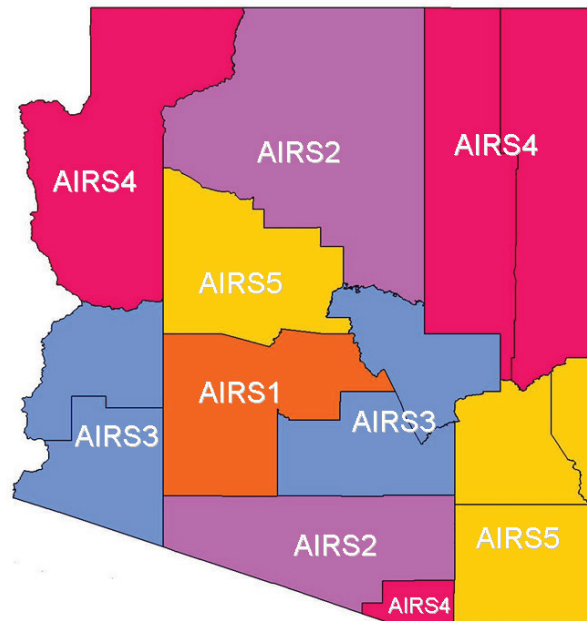
Yuba County first responder radios include surrounding agencies' conventional frequencies for interoperability between local agencies, and also include statewide interoperability frequencies. Yuba County also maintains a Raytheon ACU-M portable gateway device which is available for deployment within the OA. This portable gateway includes portable antennas and various interface cables for several common models of portable radios.

## Appendix E - Neighboring States

### Arizona Interagency Radio System (AIRS) State Plan

AIRS is a suite of full-time, cross-banded (i.e. VHF, UHF, and 800 MHz) mutual aid channels designated specifically for multi-agency use across the State of Arizona. Agencies and organizations wishing to operate on AIRS must sign a Memorandum of Understanding (MOU) with the Department of Public Safety (DPS) which holds the licenses for AIRS frequencies. Please contact [siec@azgita.gov](mailto:siec@azgita.gov).

**AIRS Channel Assignments**



VHF Channels					
AZ-SIEC Name	Band-Width	TX Freq MHz	TX CTCSS Hz	RX Freq MHz	RX CTCSS Hz
AIRSAZ	25 KHZ	155.190	156.7	155.475	CSQ
AIRS1	25 KHZ	155.190	141.3	155.475	CSQ
AIRS2	25 KHZ	155.190	131.8	155.475	CSQ
AIRS3	25 KHZ	155.190	110.9	155.475	CSQ
AIRS4	25 KHZ	155.190	123.0	155.475	CSQ
AIRS5	25 KHZ	155.190	167.9	155.475	CSQ
VAIRS_D	25 KHZ	155.475	156.7	155.475	CSQ
VCALL	12.5 KHZ	155.7525	156.7	155.7525	CSQ
VTAC1	12.5 KHZ	151.1375	156.7	151.1375	CSQ
VTAC2	12.5 KHZ	154.4525	156.7	154.4525	CSQ
VTAC3	12.5 KHZ	158.7375	156.7	158.7375	CSQ
VTAC4	12.5 KHZ	159.4725	156.7	159.4725	CSQ

UHF Channels					
AZ-SIEC Name	Band-Width	TX Freq MHz	TX CTCSS Hz	RX Freq MHz	RX CTCSS Hz
AIRSAZ	25 KHZ	465.375	100.0	460.375	CSQ
AIRS1	25 KHZ	465.375	141.3	460.375	CSQ
AIRS2	25 KHZ	465.375	131.8	460.375	CSQ
AIRS3	25 KHZ	465.375	110.9	460.375	CSQ
AIRS4	25 KHZ	465.375	123.0	460.375	CSQ
AIRS5	25 KHZ	465.375	167.9	460.375	CSQ
UAIRS_D	25 KHZ	460.375	100.0	460.375	CSQ
UCALL	12.5 KHZ	458.2125	156.7	453.2125	CSQ
UCALL_D	12.5 KHZ	453.2125	156.7	453.2125	CSQ
UTAC1	12.5 KHZ	458.4625	156.7	453.4625	CSQ
UTAC1_D	12.5 KHZ	453.4625	156.7	453.4625	CSQ
UTAC2	12.5 KHZ	458.7125	156.7	453.7125	CSQ
UTAC2_D	12.5 KHZ	453.7125	156.7	453.7125	CSQ

UHF Channels					
AZ-SIEC Name	Band-Width	TX Freq MHz	TX CTCSS Hz	RX Freq MHz	RX CTCSS Hz
UTAC3	12.5 KHZ	458.8625	156.7	453.8625	CSQ
UTAC3_D	12.5 KHZ	453.8625	156.7	453.8625	CSQ

800 MHz Channels					
AZ-SIEC Name	Band-Width	TX Freq MHz	TX CTCSS Hz	RX Freq MHz	RX CTCSS Hz
AIRSAZ	20 KHZ	821.0125	156.7	866.0125	CSQ
AIRS1	20 KHZ	821.0125	141.3	866.0125	CSQ
AIRS2	20 KHZ	821.0125	131.8	866.0125	CSQ
AIRS3	20 KHZ	821.0125	110.9	866.0125	CSQ
AIRS4	20 KHZ	821.0125	123.0	866.0125	CSQ
AIRS5	20 KHZ	821.0125	167.9	866.0125	CSQ
8AIRS_D	20 KHZ	866.0125	156.7	866.0125	CSQ

**Nevada****Douglas County, Nevada****24-Hour Facilities****911-Dispatch Center for Douglas County and Alpine County**

Telephone: (775) 782-5126

**Shared Tactical Channels**

VHF High				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Law	NLEMA	155.6550 W	155.6550 W	CSQ
Law	FLEMA	155.4750 W	155.4750 W	CSQ
Law	CLEMARS 1	154.9200 W	154.9200 W	CSQ
Fire	WHITE FIRE #1	154.2800 W	154.2800 W	CSQ
Fire	WHITE FIRE #2	154.2650 W	154.2650 W	CSQ
Fire	WHITE FIRE #3	154.2950 W	154.2950 W	CSQ
Fire	WHITE FIRE #4	155.1450 W	155.1450 W	CSQ
Tac	CALCORD	156.0750 W	156.0750 W	CSQ

## Washoe County, Nevada

### 24-Hour Monitoring Facilities

The **Washoe County Sheriff's Office** provides 24-hour monitoring of Sheriff's Office-only channels through the Incline Village Substation. The Incline Village Dispatch Center is 1 of 3 designated 9-1-1 Public Safety Answering Point (PSAP). Telephone: (775) 832-4110 or (775) 831-0587

The **City of Reno ECOM Dispatch Center** provides 24-hour monitoring of Reno Police as well as Washoe County Sheriff's Office Traffic north of Interstate 80. They also dispatch and monitor City of Reno Fire and Sierra Fire Protection District traffic. Telephone: (775) 334-2399

The **City of Sparks Dispatch Center** provides 24-hour monitoring of Sparks Police and Fire traffic. Telephone: (775) 353-2231

### Regularly Monitored Channels

VHF High				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
Fire	TM SLIDE	158.7450 W	159.3900 W	107.2
Fire	TM PEAV	158.7450 W	159.3900 W	118.8
Fire	TM VP	158.7450 W	159.3900 W	136.5
Fire	TM GER	158.7450 W	159.3900 W	127.3
Fire	INC MAIN	154.2350 W	154.2350 W	None
Fire	WHITE 1	154.2800 W	154.2800 W	None
Law	WHITE	155.9850 W	155.9850 W	107.2

800 MHz				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
PS	8CALL90	806.0125 NPS	851.0125 NPS	156.7

## Washoe County, Nevada (con't)

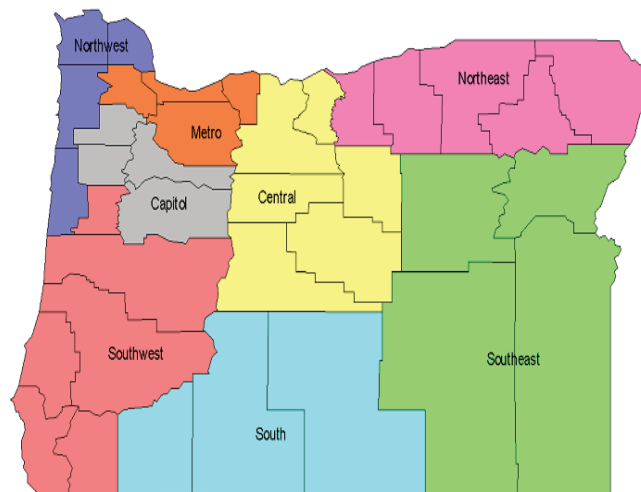
Shared Channel Infrastructure

800 MHz				
Type	Name	Rx (Output)	Tx (Input)	CTCSS
PS	8TAC91	806.5125 NPS	851.5125 NPS	156.7
PS	8TAC92	807.0125 NPS	852.0125 NPS	156.7
PS	8TAC93	807.5125 NPS	852.5125 NPS	156.7
PS	8TAC94	808.0125 NPS	853.0125 NPS	156.7
Law	NA LAW	808.7375 NPS	853.7375 NPS	156.7
Fire	NA FIRE	808.9875 NPS	853.9875 NPS	156.7
Note: These channels are not normally monitored but are available to all Dispatch Centers as requested.				

### **Oregon Wireless Interoperability Network (OWIN)**

Oregon is in the process of building out the Oregon Wireless Interoperability Network (OWIN) consolidating the state's four existing major radio networks (State Police, Department of Transportation, Department of Corrections, Department of Forestry) and creates a statewide "system of systems" for mission critical, public safety communications. The required OWIN system operation within each band is narrowband (12.5 kHz bandwidth) analog FM and P25 Phase 1 Frequency Division Multiple Access (FDMA) conventional operation. The OWIN plan is to install a specified number of 150/450/800 MHz remote base/mobile relay stations in 111 specific communication sites throughout Oregon. OWIN has defined eight interoperability regions and assigned counties to each region known as the OWIN Interoperability Regions.

### **OWIN Interoperability Regions**



**Active Tactical Channel by Region**

Region	Calling Channel	Active Tactical Channel	Primary Standby Tactical Channel
Northwest	VCALL	VTAC 1	VTAC 2
Metro	VCALL	VTAC 2	VTAC 1
Capitol	VCALL	VTAC 3	VTAC 4
Southwest	VCALL	VTAC 4	VTAC 3
Central	VCALL	VTAC 4	VTAC 3
South	VCALL	VTAC 1	VTAC 2
Northeast	VCALL	VTAC 1	VTAC 2
Southeast	VCALL	VTAC 3	VTAC 4

**Regional Monitoring of the Calling Channels**

The Oregon use of the VCALL and VTAC channels differ from the National Standard through the use of NTIA frequencies. This allows Oregon to have mobile relay operation on the VHF nationwide interoperability channels. In order to be able to interoperate with non-Oregon subscribers in Oregon, it is necessary for the VHF interoperability stations to operate both as a mobile relay and as a simplex base station. Each VHF station will, therefore, also require a second receiver on the mobile relay output frequency. Dispatchers may then operate either in the Repeat or in the Direct mode on the VCALL and VTAC channels.

Transmit Frequency National Interop (MHz)	Receive frequency NTIA Federal (MHz)
151.1375	166.5000
154.4525	166.8125
155.7525	167.8875
158.7375	168.2625
159.4725	169.1875

### **Statewide Monitoring of Calling Channels**

Statewide monitoring is required for all Calling Channels at the Anderson Readiness Center (ARC) in Salem.

### **Law Enforcement Radio Network:**

In addition to the Nationwide Interoperability Channels, the OWIN Interoperability system layer will include a new Law Enforcement Radio Network (LERN). This network, dedicated to federal, state, local, and tribal law enforcement interoperability, will have two VHF repeater channels available in over 100 radio sites around the state.

To learn more about OWIN, contact the OWIN Office at 503.934.6944

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*Cal-IFOG*

*Jun 2010*

**Notes**



## Notes



Credits

**Angela Azevedo**, California  
Department of Corrections

**John Batarseh**, California Highway  
Patrol

**Gary Basor**, Lake County Sheriff's  
Office

**Chris Baker**, Roseville Fire Department

**Art Botterell**, Association of Counties

**George Brown**, San Luis Obispo  
county Department of Public Health

**Joel Brown**, Butte County  
Communications Department

**Adam Christianson**, CalSIEC  
Co-Chair

**Paul Christman**, Murrieta Fire

**Bill Cicchillo**, Los Angeles Sheriff's  
Department

**Jim Coates**, Sacramento

**Mary Cook**, Department of Fish and  
Game

**Bill Corey**, Sutter County

**Mike Crews**, Statewide Interoperability  
Coordinator

**Kent Eldridge**, Sacramento  
Communications and Information  
Technology Office

**Gerald Fogel**, Fremont Fire Department

**Dennis Garton**, Tehama County  
Sheriff's Department

**Jamie Granada**, California National  
Guard

**Chris Gray**, San Rafael Fire  
Department

**Ben Green**, Cal EMA

**Ron Grimm**, Fresno Police Department

**Weedy Hannibal**, Butte County

**Kris Higgs**, Cal EMA

**Sue Johnson**, Colusa County Sheriff

**Kody Kerwin**, Contra Costa Fire  
Protection District

**Tom Langenberg**, California National  
Guard

**George Lowry**, Cal EMA

**Mark Lockwood**, Stanislaus Regional  
9-1-1

**Art Mcdole**, APCO

**Dennis Marin**, Orange County

**Ross Merlin**, DHS Office of Emergency  
Communications

**Labecca Nessier**, Yurok Tribe

**Clement Ng**, San Francisco Bay Area  
UASI

**Kevin Nida**, California State Firefighters  
Association

**Richard Osborne**, California  
Emergency Management Agency

**Steven Page**, City of Pasadena

**John Penido**, CalSIEC Chair

**Bill Pennington**, Cal EMA

**John Powell**, former CalSIEC Chair

**Don Root**, San Diego County

**Mike Rowles**, San Bernardino County

**Al Ruiz**, Los Angeles City Fire  
Department

**John Schmidt**, Department of  
Transportation

**Marc Shaw**, California Highway Patrol

**Robert Stevens**, Sacramento County  
Sheriff's Department

**Robert Stoffel**, Orange County  
Sheriff's Department

**Robert Samaan**, Cal EMA

**Bob Sanders**, Department of Justice

**Glen Savage**, CalFIRE

**Tonya Thomas**, Emergency Medical  
Services Authority

**Stephan Virdure**, Department of  
Justice

**Steve Weston**, Los Angeles County  
Fire Department

**Tom Williams**, Department of Finance

## **Interoperable Communications Watch Out Situations**

1. Incident is using radio frequencies in more than one spectrum band (VHF, UHF, and/or 700/800 MHz.)
2. Incident using different radio spectrum via console or gateway patches.
3. Unable to communicate critical information due to radio congestion.
4. Unfamiliar with radio system(s) or assigned radio functionality.
5. Instructions and assignments not clear.
6. Have no or inadequate communication with your crew members or supervisor.
7. Dispatch to Dispatch channel patching.
8. Inadequate number of tactical channels available or assigned.
9. Multiple conversations on the same talkgroup or channel.
10. Unsure that the radios systems that you are using for interoperability completely support the incident with good radio coverage.
11. High level of background noise (i.e. Wind, Generators, Power tools, Fire Pumps).
12. Emergency button activation – Who is receiving the notification?
13. Multiple agencies performing radio programming at the incident.
14. Originations in the system do not use the same vocabulary.
15. Mobile gateway devices being used in a strategic (wide-area) rather than tactical (local) environment.
16. Multiple mobile gateways available at the incident.
17. Responding agencies have not identified a single Communications Unit Leader for the incident.
18. Working in the deep interior of a building, parking garage, or underground.

